# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>HESI Study Packet</td>
<td></td>
</tr>
<tr>
<td>Introduction</td>
<td></td>
</tr>
<tr>
<td>HESI Test Overview (Math, Reading, Comprehension, Vocabulary, Grammar)</td>
<td>1-2</td>
</tr>
<tr>
<td>Math (face sheets precedes each section—pages bold, underlined;</td>
<td></td>
</tr>
<tr>
<td>Answers follow each section</td>
<td></td>
</tr>
<tr>
<td>Math diagnostic Test</td>
<td></td>
</tr>
<tr>
<td>HEST Math Review I-III: Add, subtract, multiply, divide</td>
<td>3-4</td>
</tr>
<tr>
<td>Math IV-VI: Add, subtract, multiply, divide decimals</td>
<td>9-14</td>
</tr>
<tr>
<td>Math VII-XII: Fraction terms; reducing proper and improper fractions;</td>
<td>15-19</td>
</tr>
<tr>
<td>LCD changing improper to mixed, mixed to improper; ass, subtract,</td>
<td></td>
</tr>
<tr>
<td>multiply, divide fractions; change fractions to decimals; change</td>
<td></td>
</tr>
<tr>
<td>decimals to fractions</td>
<td></td>
</tr>
<tr>
<td>Math XIII: Ratio/Proportion</td>
<td>20-33</td>
</tr>
<tr>
<td>Math XVI: Percentages</td>
<td>34-36</td>
</tr>
<tr>
<td>Math: Helpful information to memorize and understand: chart of</td>
<td>37-39</td>
</tr>
<tr>
<td>fractions, decimals, percents; Roman numerals; measurement conversions</td>
<td></td>
</tr>
<tr>
<td>Math Review Answer key</td>
<td>40-41</td>
</tr>
<tr>
<td>MATH PRACTICE TEST 1 (face sheets)</td>
<td>42-43</td>
</tr>
<tr>
<td>1. Add, subtract, multiply, divide</td>
<td>44-46</td>
</tr>
<tr>
<td>2. Multiply, divide (by &amp; into), and, subtract decimals</td>
<td></td>
</tr>
<tr>
<td>3. Change fractions to decimals; decimals to fractions</td>
<td></td>
</tr>
<tr>
<td>4. Add, subtract, multiply, divide fractions</td>
<td></td>
</tr>
<tr>
<td>5. Percentage</td>
<td></td>
</tr>
<tr>
<td>6. Ratio/Proportion</td>
<td></td>
</tr>
<tr>
<td>7. Conversion</td>
<td></td>
</tr>
<tr>
<td>Topic</td>
<td>Pages</td>
</tr>
<tr>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>Rounding</td>
<td>60-61</td>
</tr>
<tr>
<td><strong>Math Practice Test 2</strong> (face sheets)</td>
<td>62-64</td>
</tr>
<tr>
<td>Add, subtract, multiply, divide</td>
<td>65-66</td>
</tr>
<tr>
<td>Change decimals to fractions; change fractions to decimals; multiply, divide (by &amp; into) add, subtract decimals.</td>
<td>67-68</td>
</tr>
<tr>
<td>Add, subtract, multiply, divide fractions</td>
<td>69-70</td>
</tr>
<tr>
<td>Percentage</td>
<td>71-72</td>
</tr>
<tr>
<td>Ratio/Proportion</td>
<td>73-74</td>
</tr>
<tr>
<td>Conversion</td>
<td>75-76</td>
</tr>
<tr>
<td>Rounding</td>
<td>77-78</td>
</tr>
<tr>
<td><strong>Reading Comprehension</strong> (face sheets) face sheet precedes each section pages are <strong>bold, underlined</strong>; answers follow each section</td>
<td>79-80</td>
</tr>
<tr>
<td>How to answer reading comprehension questions and sharpen your reading skills (without really trying)</td>
<td>81-83</td>
</tr>
<tr>
<td>Sample reading test</td>
<td>84-86</td>
</tr>
<tr>
<td><strong>Reading</strong></td>
<td>87-92</td>
</tr>
<tr>
<td>Vocabulary (face sheets) face sheet precedes each section pages are <strong>bold, underlined</strong>; answers follow each section</td>
<td>93-95</td>
</tr>
<tr>
<td>1. Test 5 (everyday)</td>
<td>96-97</td>
</tr>
<tr>
<td>2. Exams 7, 10-14 (everyday)</td>
<td>98-102</td>
</tr>
<tr>
<td>3. Spelling (everyday)</td>
<td>103-107</td>
</tr>
<tr>
<td>4. Multiple Choice Quiz (medical terminology) Chapter One- Four, Twenty-One</td>
<td>108-122</td>
</tr>
<tr>
<td>List of medical terminology (four study only)</td>
<td>123-134</td>
</tr>
<tr>
<td><strong>Grammar</strong> (face sheets) face sheet precedes each section- pages are <strong>bold, underlined</strong>; answers follow each section</td>
<td>135-137</td>
</tr>
<tr>
<td>1. Exercise One: Problems with Verbs (Part 1)</td>
<td>138-139</td>
</tr>
</tbody>
</table>
2. Exercise Two: Problems with Verbs (Part 2) 140
3. Exercise Three: Problems with Verbs (part 3) 141
4. Exercise Fourteen: Problems with Introductory Verbal Modifiers 142-144
5. Exercise Fifteen: Problems with Parallel Structure 145-147
Answer keys for above grammar section (1-6) 150-158
7. Lesson 5: Sentence Structure: Dangling Modifiers 159-161
8. Lesson 5: Sentence Structure: Parallel Structure 162-164
Answer keys for above grammar section (7-8) 165
9. Plurals: Ex 2, 3, 4, 5 166-169
10. Verbs: Ex 12, 13 170-172
Answer keys for above grammar section (9-10) 173-174
11. Verbs: (Subjects – Verbs Agreement) lesson 12, Exercise 19 175-178
Answer key for the above grammar section (11) 179-180
12. Gerunds and Infinitives 181
Answer key for above grammar section (12) 182
**Math Overview**

Types of questions (no word or story problems)

1. Add, subtract
2. Add, subtract: decimals, whole numbers to decimals
3. Ratio; change fractions to ratio
4. Change decimal to percent
5. Multiply decimals
6. Divide by decimals
7. Rounding
8. Change fractions to decimals
9. Divide by fractions
10. Reduce
11. Add fractions with unlike denominators
12. Divide fractions by whole numbers
13. Divide fractions by fractions

**HESI Reading Comprehension Overview**

1. Need a good vocabulary to answer questions
2. Read, summarize
3. Implies information: Ex. (From the text) In a test, spend more time on essay questions, which are worth more. (From the question) In a test, in order to get more points, spend more time on difficult questions.
4. Long and short paragraphs
5. Other types of questions:
   A. Definition of words
   B. What is stated vs. implied
   C. Fact vs. opinion

**HESI Vocabulary Test Overview**

1. Vocabulary in context, or as definition, or correct usage---questions not always clear
   A. Multiple Choice, Scenario is set up
   B. Medical terms, some from biology
   C. Literary words
   D. Everyday words
HESI Grammar Overview

1. Particularly difficult for ESL (foreign) students
2. Questions 1-25 select best answer
   A. Verb Forms
   B. Dangling modifiers

3. Questions 26-50 Identify and correct incorrect portion
   a. Subject-Verb agreement
   b. Parallelism
   c. Plurals
   d. Infinitives (to + Verb) or Gerunds (verb + ing)
   e. Particles/prepositions (depend on, not depend in)
   f. There, their, they’re usage

4. Questions 51-55
Directions:
1) Take the diagnostic test that follows.
2) Score with the answer key that immediately follows.
3) Provide the following information hereon (pages 3,4) for tutor- and-self-evaluation:

Total number of problems: 27
Number correct: ______ Multiply number correct X 100= _______
Divide by total number of problems= _____%

Tutor will review for areas to work on in Math.

Areas to work on: __________, __________, __________, __________

NEXT STEP: GO ON TO MATH REVIEW, THEN PRACTICE TESTS 1 AND 2.
Circle question number (s) missed  
1  
2 5  
3 6  
4  
7  
8 9 10 11 12 16a 17 18 19  
13  
14  
15  
16b  
21  
22  
23  
24 25 26  
27a 27b  

<table>
<thead>
<tr>
<th>Type of Question</th>
<th>Question Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addition</td>
<td>Add, subtract, multiply, decimals</td>
</tr>
<tr>
<td>Multiplication</td>
<td>Concept of decimals, fractions, percent</td>
</tr>
<tr>
<td>Division</td>
<td>Add fractions w/ unlike denominators</td>
</tr>
<tr>
<td>Subtraction</td>
<td>Multiply fractions</td>
</tr>
<tr>
<td></td>
<td>Divide fractions</td>
</tr>
<tr>
<td></td>
<td>Subtract decimals</td>
</tr>
<tr>
<td></td>
<td>Multiply decimals</td>
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<tr>
<td></td>
<td>Divide by decimals</td>
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<td></td>
<td>Percent problem</td>
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<td></td>
<td>Ratio Problem</td>
</tr>
</tbody>
</table>
Number Power Review Pretest

This pretest will tell you which chapters of Number Power Review you need to work on and which you have already mastered. Do all the problems that you can. There is no time limit. Check your answers with the answer key. Fill out chart at test end. Do all work on these pages.

Find an answer to each problem

1. 793
2. 215 \times 89 =
3. 417 \div 19

+ 385

Find an answer to each problem.

4. 2800
5. 173
6. 4,208 \div 16

- 946

\times 26

7. Find the Value of the expression: 3 (\$2.50 - \$1.00) + (\$10.00 \div 4).

8. Write the following numbers in order, from least to greatest.

\frac{3}{3} \ , \ 0.034 \ , \ 30\% \ , \ \frac{2}{2} \ , \ 4\% \ , \ 0.4

\frac{4}{4} \ , \ 3

9. What percent of this pizza has been eaten?
Write <, > or + to compare each pair of numbers.

10. \( \frac{3}{8} \) ___ 21
11. \( \frac{4}{3} \) ___ \( \frac{14}{5} \)
12. \( \frac{4}{2} \) ___ \( \frac{11}{5} \)

Solve each Problem.

13. 2 \( \frac{3}{4} \) + 1 \( \frac{1}{4} \)
14. \( \frac{2}{0} \times \frac{3}{0} \)
15. \( \frac{1}{4} \div \frac{5}{8} \)

16. Keisha bought sixteen cans of soda for a birthday party. Six of these are cans of cola.
   a. What fraction of the soda is cola (red)?
      
   b. What is the ratio of cola to flavors that are not cola?
      
Write <, >, or = to compare the pair of decimals.

17. 0.65 _______ 0.605
18. 0.329 _______ 0.48
19. 1.14 _______ 1.042

20. Which expression can be used to find the width of each board?
   
   Board gap 0.375
   ...........................................................................
   18”

   a. 18+ (3 x 0.375)  
      4
   b. 18+ (3 x 0.375)  
      3
   c. 18- (3 x 0.375)  
      3
   d. 18- (3 x 0.375)  
      4
   e. 18- (4 x 0.375)  
      4
Solve each problem.

21. \( 5.08 \)  

22. \( 2.05 \times 0.06 = \)  

23. \( 2.842 \div 1.4 = \)  

\[ -2.92 \]

24. The Clothes Tree is offering a 25% discount on all women’s sweaters. Including a 6% sales tax, what will Selena pay for a sweater that normally sells for $48.00?

For problem 25 & 26, refer to the circle graph.

25. What percent of the students at Highland Middle School are in the 8th grade?

26. Suppose that next year the enrollment at Highland Middle School increases by 20%. How many students will be enrolled at Highland next year?

27. What is the ratio of the amount that Jonathan saved in May to the amount he saved in January? (Reduce to lowest terms. If necessary)

If Jonathan’s take-home pay is 1,500 per month, how much did he save during the 6 months shown on the graph?
Answer Key

1. 1,695
2. 19,135
3. 21 R 18
4. 1,854
5. 4,498
6. 263
7. $7.00 ($4.50 + $2.50)
8. 4%, 30%, 0.34, 0.4, 2/3, ¾
9. 62.5%
10. <
11. =
12. >
13. 4 – ½
14. 2/5
15. 2/5
16. a. 3/8 (6/16) b. 3/5 or 3 to 5 (6/10)
17. >
18. <
19. >
20. d.
21. 2.16
22. 0.123
23. 2.03
24. $38.16 ($36.00+ $2.16)
25. 34% (170/500 x 100%)
26. 600 (500 + 100)
27. 5/3 (25/15)
Math Review

(Note: This page has space for portion and for overall test score.)

**Directions:**
1) Take the portion of the test that follows. Label and do all work on front and back of same page as problem.
2) See pages 42-44 for answer key, to score portion.
3) Provide the following information hereon (page 10) for tutor- and self-evaluation:

   Total number of problems: __24___ Add, subtract, multiply, divide, whole numbers
   Number correct: ______ Multiply number correct X 100 = ________
   Divide by total number of problems = ______ %

   Tutor will review for areas to work on in math.
   Areas to work on: __________, __________, __________, __________

**OVERALL MATH REVIEW SCORE**

   Total number of problems (overall): __104__
   Number correct: ______ Multiply number correct X 100 = ________
   Divide by total number of problems = ______ %

   Tutor will review for areas to work on in math.
   Areas to work on: __________, __________, __________, __________

NEXT STEP: GO ON TO PRACTICE TESTS 1 AND 2.
Basic Addition and Subtraction

**Basic Addition**

462 + 133

<table>
<thead>
<tr>
<th>Check by: 595</th>
</tr>
</thead>
<tbody>
<tr>
<td>462</td>
</tr>
<tr>
<td>- 133</td>
</tr>
<tr>
<td>595</td>
</tr>
</tbody>
</table>

Steps:
1. Line up digits according to place value.
2. Add the digits starting from right to left:
   - Ones: 2 + 3 = 5
   - Tens: 6 + 3 = 9
   - Hundreds: 4 + 1 = 5

**Addition w/ Regrouping**

835 + 559

<table>
<thead>
<tr>
<th>Check by: 1,394</th>
</tr>
</thead>
<tbody>
<tr>
<td>835</td>
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<tr>
<td>+ 559</td>
</tr>
<tr>
<td>1394</td>
</tr>
</tbody>
</table>

Steps:
1. Line up the digits according to place value.
2. Add:
   - Ones: 5 + 9 = 14 (carry the 1 to the tens place, which is one place to the left)
   - Tens: 1 + 3 + 5 = 9
   - Hundreds: 8 + 5 = 13

**Basic Subtraction**

5,234 - 4,112

<table>
<thead>
<tr>
<th>Check by: 1,122</th>
</tr>
</thead>
<tbody>
<tr>
<td>5,234</td>
</tr>
<tr>
<td>- 4,112</td>
</tr>
<tr>
<td>1,122</td>
</tr>
</tbody>
</table>

Steps:
1. Line up the digits according to place value.
2. Subtract:
   - Ones: 4 - 2 = 2
   - Tens: 3 - 1 = 2
   - Hundreds: 2 - 1 = 1
   - Thousands: 5 - 4 = 1

**Subtraction with Regrouping**

457 - 29

<table>
<thead>
<tr>
<th>Check by: 428</th>
</tr>
</thead>
<tbody>
<tr>
<td>457</td>
</tr>
<tr>
<td>- 29</td>
</tr>
<tr>
<td>428</td>
</tr>
</tbody>
</table>

Steps:
1. Line up the digits according to place value.
2. Subtract:
   - Ones: 7 - 9 (must borrow 1 from the 5 in the tens place)
   - Tens: 4 - 2 = 2
   - Hundreds: 4 - 0 = 4

**Vocabulary:**

- **Digit:** A numeral, (the number 7 is a digit).
- **Place Value:** Each digit in a number occupies a position – that position is called its place value.

**HESI Hints:**

- 1 Ten = 10 ones
- 1 Hundred = 100 ones
- 1 Thousand = 1000 ones

**Now you try!**

1. 1,803 + 156 =
2. 835 + 145 =
3. 1,372 + 139 =
4. 123 + 54 + 23 =
5. 673 - 241 =
6. 547 - 88 =
7. 222 - 114 =
8. 12,478 - 467 =
Basic Multiplication
(Whole Numbers)

23 X 5

\[
\begin{array}{c}
  1 \\
  23 \\
  \times \ 5 \\
  115 \\
\end{array}
\]

Steps:
1. Multiply one digit at a time.
2. Multiply \( (5 \times 23) \)
   - Ones: \( 5 \times 3 = 15 \) (carry the 1 to the tens place and write the 5 in the ones place)
   - Tens: \( 5 \times 2 = 10 + 1 = 11 \)

623 X 45

\[
\begin{array}{c}
  623 \\
  \times \ 45 \\
  3115 \\
  24,920 \\
  28,035 \\
\end{array}
\]

Steps:
1. Multiply 623 X 5
   - \( 5 \times 3 = 15 \)
   - \( 5 \times 2 = 10 + 1 \) (carried over) = 11
   - \( 5 \times 6 = 30 + 1 \) (carried over) = 31 (doesn’t need to be carried over)
2. Multiply 623 x 4 (remember to line up the ones digits with the four by using zero as the placeholder):
   - \( 4 \times 3 = 12 \)
   - \( 4 \times 2 = 8 + 1 = 9 \)
   - \( 4 \times 6 = 24 \)
3. Add the two products together:
   - \( 3,115 + 24,920 = 28,035 \) is the final product

Vocabulary:
Product: The answer to a multiplication problem.

HESI Hints:
Remember, the placeholders help keep the problem aligned. If you do not skip a space, the answer will be incorrect. Below is an example of a well-aligned problem.

Note: Timetables are crucial for doing multiplication, division, fractions, etc. Please notify the tutor if you do not know timesheets by heart at least through 9 x 9.
Steps:

1. Multiply 301 x 1
   \[ \frac{3}{4} \times 1 = 1 \]
   \[ \frac{3}{4} \times 0 = 0 \]
   \[ \frac{3}{4} \times 3 = 3 \]

2. Multiply 301 x 5
   \[ \frac{3}{4} \times 5 = 5 \text{ (remember to use a zero for a placeholder)} \]
   \[ \frac{3}{4} \times 0 = 0 \]
   \[ \frac{3}{4} \times 3 = 15 \]

3. Multiply 301 x 4
   \[ \frac{3}{4} \times 4 = 4 \]
   \[ \frac{3}{4} \times 0 = 0 \]
   \[ \frac{3}{4} \times 3 = 12 \]

4. Add the three products together:
   \[ \frac{3}{4} \times 301 + 15,050 + 120,400 = 135,751 \]
   the final product

Now You Try!

1. 846 x 7 =
2. 325 x 6 =
3. 653 x 12 =
4. 806 x 55 =
5. 795 x 14 =
6. 999 x 22 =
7. 582 x 325 =
8. 9,438 x 165 =
Basic Division
(Whole Numbers)

40 ÷ 8 =

Steps:
1. Set up the problem. (Review the vocabulary section).
2. Use a series of multiplication and subtraction problems to solve a division problem.
3. 8 x ? = 40
   Multiply: 8 x 5 = 40
   Subtract: 40 - 40 = 0
   The quotient (or answer) is 5

672 ÷ 6 =

Steps:
1. Set up the problem.
2. Begin with the hundreds place:
   o 6 x ? = 6; we know 6 x 1 = 6; Therefore, place the 1 (quotient) above the 6 hundred (dividend). Place the other 6 under the hundred and subtract: 6 - 6 = 0
   o Bring down the next number which is 7; 6 x ? = 7. There is no number that can be multiplied by six that will equal seven exactly, so try to get as close as possible without going over 7. Use 6 x 1 = 6 and set it up just like the last subtraction problem. 7 - 6 = 1
   o Bring down the 2 from the dividend which results in the number 12 (the 1 came from the remainder of 7 - 6 = 1).
   o 6 x ? = 12; ? = 2 The two becomes the next number in the quotient. 12 - 12 = 0. There is not a remainder.
   o The quotient (or answer) is 112.

Vocabulary
Quotient: The answer to a division problem.
Dividend: The number being divided.
Divisor: The number by which the dividend is divided.

HESI Hints:
The 5 represents the divisor, the 45 represents the dividend, and the 9 represents the quotient. It is the best not to leave a division problem with a remainder, but to end it as a fraction or a decimal point instead. To make the problem into a decimal, just add a decimal point and zeros at the end of the dividend and continue. If a remainder continues to occur, round to the hundredths place.
Example:
233.547 → 233.55 (the 7 rounds the 4 to a 5)

Steps to Division
1. Division
2. Multiplication
3. Subtraction
4. Bring down
Steps:
1. Set up the problem.
2. 5 does not divide into 1, but does divide into 17.
3. $5 \times 3 = 15$ Write the 3 in the quotient. (It is written above the 7 in seventeen because that is the last digit in the number).
   - $5 \times 3 = 15$
   - $17 - 15 = 2$
4. Bring the 4 down. Combine the 2 (remainder from 17-15) and 4 to create 24.
5. Five does not divide evenly into 24; therefore try to get close without going over.
   - $5 \times 4 = 20$
   - $24 - 20 = 4$
6. There is a remainder of 4, but there is not a number left in the dividend. Add a decimal point and zeros and continue to divide.
7. The quotient (or answer) is 34.8 (thirty-four and eight tenths).

**Now You Try!**

1. $132 \div 11 =$
2. $9,618 \div 3 =$
3. $2,466 \div 2 =$
4. $325 \div 13 =$
5. $5,024 \div 8 =$
6. $3,705 \div 5 =$
7. $859 \div 4 =$
8. $6,987 \div 7 =$
Math Review

Directions: 1) Take the portion of the test that follows. Label and do all work on front and back of same page as problem.
2) See pages 42-44 for answer key, to score portion.
3) Provide the following information hereon (page 16) for tutor-and-self-evaluation:

Total number of problems: _____ 16 _____ Add, subtract, multiply, divide decimals
Number correct: _____ Multiply number correct X 100 = _______
Divide by total number of problems = __________ %

Tutor will review for areas to work on in math.

Areas to work on: __________, __________, __________, __________

Next step: Go to Math Review,
Then Practice Tests 1 & 2
# Addition and Subtraction of Decimals

## 2.6 + 3.1

| 2.6 | + 3.1 | 5.7 |

**Steps:**
1. Line up the decimal points.
2. Add the tenths together: \(6 + 1 = 7\)
3. Add the ones together: \(3 + 2 = 5\)
4. Final answer: 5.7 (5 and 7 tenths).

**Vocabulary:**
Place value (regarding decimals):
Numbers to the right of the decimal point have different terms from the whole numbers to the left of the decimal point. Each digit in a number occupies a position; that position is called its place value.

## 5 + 12.34

| 5.00 | + 12.34 | 17.34 |

**Steps:**
1. Line up the decimal points.
2. Add the hundredths: \(4 + 0 = 4\)
3. Add the tenths: \(3 + 0 = 3\)
4. Add the ones: \(2 + 5 = 7\)
5. Add the tens: \(1 + 0 = 1\)
6. Final answer: 17.34 (17 and 34 hundredths).

**HESI Hints:**
The word “and” when writing the number in words stands for the decimal.
Example: 5.7 (five and seven tenths)

## 7.21 – 4.01

| 7.21 | - 4.01 | 3.20 |

**Steps:**
1. Line up the decimal points
2. Subtract the tenths: \(2 – 0 = 2\)
3. Subtract the ones: \(7 – 4 = 3\)
4. Final answer: 3.20 (3 and 20 hundredths).

## 12 – 8.99

| 12.00 | - 8.99 | 3.01 |

**Steps:**
1. Line up the decimal points.
2. Since twelve is a whole number, add a decimal point and zeros.
3. .00 - .99 cannot be subtracted; therefore, 1 must be borrowed from the 12 and regrouped.
4. The ones become 1, the tenths become 9, and the hundredths become 10.
5. Subtract the hundredths: \(10 – 9 = 1\)
6. Subtract the tenths: \(9 – 9 = 0\)
7. Subtract the ones: \(11 – 8 = 3\)
   - 1 was borrowed from the tens in order to subtract the 8.
8. Final answer: 3.01 (3 and 1 hundredth).

**Now You Try!**

1. \(9.2 + 7.55 = \)
2. \(2.258 + 64.58 = \)
3. \(892.2 + 56 = \)
4. \(22 + 3.26 = \)
5. \(8.5 + 7.55 + 14 = \)
6. \(18 + 7.55 = \)
7. \(31.84 – 2.430 = \)
8. \(21.36 – 8.79 = \)
## Multiplication of Decimals

### Steps:

1. **Multiply** $757 \times 21$ (do not worry about the decimal until the final product has been calculated).
2. Starting from the right count the decimal places in both numbers and add together (2 decimal places).
3. Move to the left 2 places and then place the decimal.

### Vocabulary:

Place value (regarding decimals): Numbers to the right of the decimal point have different terms from the whole numbers to the left of the decimal point. Each digit in a number occupies a position: That position is called its place value.

### Example 1: $75.7 \times 2.1$

- **75.7**
- **2.1**
- **1** decimal place
- **1** decimal place
- **2** decimal places
- **Move to the left two decimal places in the final product.**

### Example 2: $0.002 \times 3.4$

- **0.002**
- **3.4**
- **3** decimal places
- **1** decimal place
- **4** decimal places
- **Move four places to the left.**

### Example 3: $3.41 \times 7$

- **3.41**
- **7**
- **2** decimal places
- **0** decimal places
- **2** decimal places
- **Move two places to the left.**

### Now you Try!

1. $0.003 \times 4.23 = $
2. $98.26 \times 8 = $
3. $8.03 \times 2.1 = $
4. $250.1 \times 25 = $
5. $0.1364 \times 2.11 = $
6. $8.23 \times 4 = $
7. $0.058 \times 64.2 = $
8. $794.23 \times .001 = $
### Division of Decimals

#### 34 ÷ 2.5

**Steps:**

1. Set up the division problem.
2. Move the decimal point in 2.5 one place to the right making it a whole number.
3. “What is done to one side must be done to the other side.” Move the decimal point one place to the right in 34, making it 340, and then bring the decimal point up into the quotient.
4. Divide normally:
   - 25 x 1 = 25
   - Subtract 34 – 25 = 9
   - Bring down the zero to make 90
   - 25 x 3 = 75 This is as close to 90 as possible without going over
   - Subtract 90 – 75 = 15
   - Add a zero to the dividend and bring it down to the 15 making it 150
   - 26 x 6 = 150
   - 150 – 150 = 0
5. The quotient is 13.6

#### 2.468 ÷ 0.2

**Steps:**

1. Set up the division problem.
2. Move the decimal point in 0.2 over one place to the right making it a whole number. .02 is now 2.
3. Move the same number of spaces in the dividend.
2.468 is now 24.68.
4. Bring the decimal point up to the quotient in the new position.
5. Divide normally.

#### Vocabulary:

- **Quotient**: The answer to a division problem.
- **Dividend**: The number being divided.
- **Divisor**: The number by which the dividend is divided.

The 5 represents the divisor, the 45 represents the dividend, and 9 represents the quotient. Place value (regarding decimals): Numbers to the right of the decimal point have different terms than whole numbers.

#### HESI Hints:

The number 25 is a whole number. Though this number could be written 25.0, decimals are usually not displayed after a whole number.
Steps:

1. Set up the division problem.
2. Move the decimal point in the divisor until it is a whole number.
   
   0.05 is now 5
3. Move the decimal in the dividend the same amount of spaces that were moved in the divisor.
   
   0.894 is now 89.4
4. Divide normally.

Now You Try!

1. $48 \div 0.4 = $
2. $144 \div 0.6 = $
3. $3.75 \div 0.4 = $
4. $56.2 \div 0.2 = $
5. $2.6336 \div 0.32 = $
6. $591 \div 0.3 = $
7. $0.72 \div 0.8 = $
8. $0.132 \div 0.11 = $
Math Review

Directions:

1) Take the portion of the test that follows. Label and do all work on front and back of same page as problem.

2) See pages 42-44 for answer key, to score portion.

3) Provide the following information hereon (page 21) for tutor-and self-evaluation:

Total number of problems: ___48___ Fractions
Number correct: ________ Multiply number correct X 100=________ +-
Divide by total number of problems=______%

Tutor will review for areas to work on in math.

Areas to work on:__________, __________, __________, __________

Next step: Go to Math Review,
Then Practice Tests 1 & 2
### Basic Fraction Vocabulary and Explanation

**Terms**

Numerator (part)  
Denominator  

Example: 21 is solved using division  

(7}

(The top number goes inside the box. The bottom number goes outside the box.)  

The answer is 3.

### Reducing Fractions using the Greatest Common Factor

Reduce  

Factors of 7 and 21:  

7 {1, 7}  
21 {1, 3, 7, 21}  

The greatest common factor is 7; therefore divide the numerator and denominator by 7.

\[
\frac{7}{21} \div 7 = \frac{1}{3}
\]

Reduce  

Factors of 12 and 20:  

12 {1, 2, 3, 4, 6, 12}  
20 {1, 2, 4, 5, 10, 20}  

The greatest common factor is 4 (they do have 1 and 2 in common, but the greatest factor is needed).

\[
\frac{12}{20} \div 4 = \frac{3}{5}
\]

### Description:

- **Numerator (part)**: The numerator is the top number of the fraction. It represents the part or pieces.
- **Denominator**: The denominator is the bottom number of the fraction. It represents the total or whole amount.
- **Fraction Bar**: The fraction bar is the line that separates the numerator and the denominator.

An improper fraction occurs when the numerator is larger than the denominator. An improper fraction should always be reduced or made into a mixed number.

### Description:

- **Factor**: A number that divides evenly into another number.

Example: Factors of 12:

- 1 x 12 = 12
- 2 x 6 = 12
- 3 x 4 = 12

12 {1, 2, 3, 4, 6, 12} Listing the factors helps determine the greatest common factor between two or more numbers.

\[
\frac{1}{2}, \frac{3}{4}, \frac{5}{6}, \frac{7}{8}, \frac{9}{10}
\]

(all represent a half)

(reducing fractions can also be called reducing a fraction to its lowest terms or simplest form.)
Least Common Denominator (LCD):

The Smallest multiple that two numbers share.

Determining the LCD is an essential step in the addition, subtraction, and ordering of fractions.

Example I: Find the least common denominator for

\[
\begin{array}{c}
3 \\
4 \\
7 \\
9
\end{array}
\]

Example II: Find the least common denominator for

\[
\begin{array}{c}
3 \\
12 \\
1 \\
8
\end{array}
\]

Description:

Steps for example I

1. List the multiples (Multiplication tables) of each denominator.
   \[
   \begin{align*}
   &4: 4 \times 1 = 4, \ 4 \times 2 = 8, \ 4 \times 3 = 12, \ 4 \times 4 = 16, \ 4 \times 5 = 20, \ 4 \times 6 = 24, \ 4 \times 7 = 28, \ 4 \times 8 = 32, \ 4 \times 9 = 36, \ 4 \times 10 = 40 \\
   &9(9, 18, 27, 36, 45, 54, 63, 72, 81, 90)
   \end{align*}
   \]
   This will be STANDARD FORM throughout for listing multiples.

2. Compare each for the least common multiple
   \[
   \begin{align*}
   &4(4, 8, 12, 16, 20, 24, 28, 32, 36, 40) \\
   &9(9, 18, 27, 36, 45, 54, 63, 72, 81, 90)
   \end{align*}
   \]

3. The least common denominator between 4 and 9 is 36 (4 x 9 = 36 and 9 x 2 = 36).

Steps for Example II

1. List the multiples of each denominator and find the common multiples.
   \[
   \begin{align*}
   &12(12, 24, 36, 48, 60, 72, 84, 96, 108, 120) \\
   &8(8, 16, 24, 32, 40, 48, 56, 64, 72, 80)
   \end{align*}
   \]
   \[
   \begin{align*}
   &f \ 4(4, 8, 12, 16, 20, 24, 28, 32, 36, 40) \\
   &f \ 9(9, 18, 27, 36, 45, 54, 63, 72, 81, 90)
   \end{align*}
   \]

2. The least common denominator between 12 and 8 is 24 (12 x 2 = 24 and 8 x 3 = 24).

Changing Improper Fractions into Mixed Numbers (An improper fraction has a larger numerator than denominator.)

Example I.

\[
\frac{3}{5} = 17 \div 17 = 3 \frac{2}{5}
\]

Changing Mixed Numbers into Improper Fractions

(A mixed number has a whole number and a fraction combined.)

Example I

\[
5 \frac{2}{3} \times 3 = \frac{17}{3}
\]

Description:

Steps for Example I

1. We cannot leave the fraction in this form, therefore we turn it into a mixed number through division. (The top number goes in the box (numerator) the bottom number (denominator) stays out).

2. The 3 becomes the whole number.

3. The remainder becomes the numerator.

4. The denominator stays the same.

Steps for Example I

1. To make a mixed number into an improper fraction, multiply the denominator and whole number together, and then add the numerator.

2. Place this new numerator over the denominator, which stays the same in the mixed number.
# Addition of Fractions

## Addition with common denominators

<table>
<thead>
<tr>
<th>Steps:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Add the numerators together $3 + 2 = 5$</td>
</tr>
<tr>
<td>2. The denominator stays the same, 7.</td>
</tr>
<tr>
<td>3. Answer: $\frac{5}{7}$ (five—sevenths)</td>
</tr>
</tbody>
</table>

$$\frac{3}{7} + \frac{2}{7} = \frac{5}{7}$$

## Addition with unlike denominators

<table>
<thead>
<tr>
<th>Steps:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Find the least common denominator by listing the multiple of each denominator.</td>
</tr>
<tr>
<td>o $5$: 5, 10, 15, 20, 25, 30</td>
</tr>
<tr>
<td>o $10$: 10, 20, 30, 40, 50</td>
</tr>
<tr>
<td>o The least common denominator is 10.</td>
</tr>
<tr>
<td>2. If the denominator is changed, the numerator must also be changed by the same number. Do this by multiplying the numerator and denominator by the same number.</td>
</tr>
</tbody>
</table>
| \[
\begin{align*}
\frac{1}{5} \times \frac{2}{2} &= \frac{2}{10} \\
\frac{7}{10} \times \frac{1}{1} &= \frac{7}{10} \\
\frac{2}{10} + \frac{7}{10} &= \frac{9}{10}
\end{align*}
\] |
| 3. Since the denominator of the second fraction is 10, no change is necessary. |
| 4. Add the numerator together and keep the common denominator. |
| 5. Reduce if necessary. |

$$\frac{1}{5} + \frac{7}{10} = \frac{2}{10} + \frac{7}{10} = \frac{9}{10}$$

## Vocabulary:

**Numerator**: the top number in a fraction

**Denominator**: the bottom number in a fraction

**Common Denominator**: two or more fraction that have the same denominator

**Least common denominator**: the smallest multiple that two numbers share.

**NOTE**: never add denominators; they must be the same for addition and subtraction before you add or subtract.
# Addition of Mixed Numbers

<table>
<thead>
<tr>
<th>Steps:</th>
<th>Now you try it!</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Find a common denominator of 4 and 10 by listing the multiples of each. ( f ) 4: 4, 8, 12, 16, 20 ( f ) 10: 10, 20, 30.</td>
<td>1. ( \frac{1}{12} + \frac{5}{12} = )</td>
</tr>
<tr>
<td>2. Calculate the new numerator of each fraction to correspond to the changed denominator.</td>
<td>2. ( \frac{7}{21} + \frac{10}{21} = ) (\frac{21}{21})</td>
</tr>
<tr>
<td>3. Add the whole numbers together, and then add the numerators together. Keep the common denominator 20.</td>
<td>3. ( \frac{1}{2} + \frac{4}{5} = ) (\frac{2}{5})</td>
</tr>
<tr>
<td>4. The Numerator is larger than the denominator (improper), change the answer to a mixed number. (review vocabulary if necessary).</td>
<td>4. ( \frac{5}{7} + \frac{3}{7} = ) (\frac{14}{7})</td>
</tr>
<tr>
<td>5. ( \frac{5}{20} + \frac{2}{20} = ) (\frac{7}{20})</td>
<td></td>
</tr>
<tr>
<td>6. ( \frac{7}{8} + \frac{2}{12} = ) (\frac{14}{24})</td>
<td></td>
</tr>
<tr>
<td>7. ( \frac{5}{9} + \frac{1}{9} = ) (\frac{6}{9})</td>
<td></td>
</tr>
<tr>
<td>8. ( \frac{12}{21} + \frac{3}{3} = ) (\frac{21}{21})</td>
<td></td>
</tr>
</tbody>
</table>
# Subtraction of Fractions

## Subtracting fractions with common denominators

<table>
<thead>
<tr>
<th>Steps:</th>
<th>Vocabulary:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Subtract the numerators:</td>
<td>Numerator: the top number in a fraction.</td>
</tr>
<tr>
<td>2. Keep the same denominator.</td>
<td>Denominator: the bottom number in a fraction.</td>
</tr>
<tr>
<td>3. Reduce the fraction by dividing by the greatest common factor:</td>
<td>Common Denominator: two or more fractions that have the same denominator.</td>
</tr>
<tr>
<td></td>
<td>Least Common Denominator: the smallest multiple that two numbers share.</td>
</tr>
<tr>
<td></td>
<td>Factor: a number that divides evenly into another number.</td>
</tr>
<tr>
<td></td>
<td>Example: $12 \div 6 = 2$ (6 and 2 are factors of 12).</td>
</tr>
</tbody>
</table>

\[
\frac{7}{9} - \frac{4}{9} = \frac{3}{9} = \frac{1}{3}
\]

\[
\frac{3}{9} \div \frac{3}{3} = \frac{1}{3}
\]

## Subtracting fractions with unlike denominators

<table>
<thead>
<tr>
<th>Steps:</th>
<th>HESI Hints:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Find the least common denominator by listing the multiples of each denominator:</td>
<td>Fractions as a whole:</td>
</tr>
<tr>
<td>2. Change the numerator to reflect the new denominator. (what is done to the bottom must be don’t to the top of a fraction).</td>
<td>15 (\frac{15}{15}) = One Whole</td>
</tr>
<tr>
<td>3. Subtract the new numerators: 10-3 = 7. The denominator stays the same.</td>
<td>o Notice in problem 3 that we added 15 to both the numerator and the denominator. We did this because it is one whole and it is the same denominator.</td>
</tr>
</tbody>
</table>

\[
\frac{5}{12} - \frac{1}{8} =
\]

\[
\frac{5}{12} \times \frac{2}{2} = \frac{10}{24}
\]

\[
\frac{1}{8} \times \frac{3}{3} = \frac{3}{24}
\]

\[
\frac{10}{24} - \frac{3}{24} = \frac{7}{24}
\]
Borrowing from Whole Numbers

<table>
<thead>
<tr>
<th>Steps:</th>
<th>Now you try it!</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Find the least common denominator</td>
<td></td>
</tr>
<tr>
<td>2. 12 cannot be subtracted from 10, therefore one must be borrowed from the whole number, making it 4, and add the borrowed one to the fraction.</td>
<td></td>
</tr>
<tr>
<td>3. Add the original numerator to the borrowed numerator (10 + 15 = 25)</td>
<td></td>
</tr>
<tr>
<td>4. Now the whole number and the numerator can be subtracted.</td>
<td></td>
</tr>
<tr>
<td>5. ( \frac{3}{10} - \frac{2}{20} = )</td>
<td></td>
</tr>
<tr>
<td>6. ( \frac{28}{37} - \frac{17}{37} = )</td>
<td></td>
</tr>
<tr>
<td>7. ( \frac{17}{25} - \frac{3}{5} = )</td>
<td></td>
</tr>
<tr>
<td>8. ( \frac{31}{54} - \frac{5}{9} = )</td>
<td></td>
</tr>
<tr>
<td>9. ( \frac{9}{10} - \frac{1}{5} = )</td>
<td></td>
</tr>
<tr>
<td>10. ( \frac{7}{18} - \frac{3}{9} = )</td>
<td></td>
</tr>
<tr>
<td>11. ( \frac{25}{7} - \frac{12}{7} = )</td>
<td></td>
</tr>
<tr>
<td>12. ( \frac{1}{2} - \frac{13}{4} = )</td>
<td></td>
</tr>
</tbody>
</table>
# Multiplication of Fractions

## Vocabulary:
- **Numerator**: the top number in a fraction.
- **Denominator**: the bottom number in a fraction.
- **Factor**: a number that divides evenly into another number.

## Multiplication of Fractions Example

### Steps:
1. Multiply the numerators together:
   - \( \frac{4}{5} \times \frac{1}{2} = \frac{4 \times 1}{5 \times 2} = \frac{4}{10} \)

   \[ \frac{4}{5} \times \frac{1}{2} = \frac{4}{10} = \frac{2}{5} \]

2. Multiply the denominators together:
   - \( \frac{5}{2} = 10 \)

3. Reduce if necessary:
   - \( \frac{4}{10} \times \frac{2}{2} = \frac{2}{5} \)

\[ \frac{4}{5} \times \frac{1}{2} = \frac{2}{5} \]

## Additional Example

### Steps:
1. Make the whole number 5 into a fraction by placing a 1 as the denominator.
2. Multiply the numerators:
   - \( 5 \times 4 = 20 \)
3. Multiply the denominators:
   - \( 13 \times 13 = 13 \)
4. Change the improper fraction into a mixed number.

\[ \frac{5}{1} \times \frac{4}{13} = \frac{20}{13} = 1 \frac{7}{13} \]

## HESI Hints:
- “Multiplying fractions is no problem. Top times top and bottom times bottom.”
- To change an improper fraction into a mixed number, divide the numerator by the denominator.

\[ \frac{20}{13} \rightarrow 1\frac{7}{13} \]

The quotient becomes the whole number. The remainder becomes the numerator, and the denominator stays the same.
## Multiply

\[
2 \frac{1}{8} \times 7 \frac{5}{6} 
\]

\[
\frac{17}{8} \times \frac{47}{6} = \frac{799}{48} 
\]

\[
\frac{799}{48} = 16 \frac{31}{48} 
\]

## Steps:

1. Change the mixed numbers into improper fractions:
   \[
   2 \frac{1}{8} \times 7 \frac{5}{6} = \frac{(2 \times 8) + 1}{8} = 17 \rightarrow \frac{17}{8} 
   \]
   \[
   7 \frac{5}{6} = \frac{(7 \times 6) + 5}{6} = 47 \rightarrow \frac{47}{6} 
   \]

2. Multiply the numerators and denominators together:
   - \(17 \times 47 = 799\)
   - \(8 \times 6 = 48\) (denominator)
   - Change the improper fraction into a mixed number.

## Now You Try!

1. \(\frac{3}{5} \times \frac{2}{3} = \)
2. \(\frac{7}{9} \times \frac{1}{9} = \)
3. \(6 \times \frac{4}{5} = \)
4. \(\frac{1}{2} / \frac{5}{x} = \)
5. \(\frac{2}{17} / \frac{1}{3/4} = \)
6. \(\frac{4}{5} / \frac{1}{4/6} = \)
7. \(\frac{3}{1/3} \times 2 = \)
8. \(\frac{1}{8/12} \times \frac{4}{1/2} = \)
## Division of Fractions

**Steps:**
1. Inverse or flip (or take the reciprocal) of the second fraction.
   - \( \frac{3}{8} \rightarrow \frac{8}{3} \)
2. Rewrite the new problem and multiply:
   - \( \frac{1}{2} \times \frac{8}{3} = \frac{8}{6} \)

### Example 1: \( \frac{1}{2} \div \frac{3}{8} \)

| \( \frac{1}{2} \div \frac{3}{8} \) | \( \frac{1}{2} \times \frac{8}{3} = \frac{8}{6} \) |
---|---|
| \( \frac{1}{2} \) | \( \frac{8}{3} \) |
| \( \frac{1}{2} \times \frac{8}{3} = \frac{8}{6} \) | \( \frac{8}{6} \) |

### Example 2: \( 1 \frac{5}{6} \div \frac{3}{4} \)

| \( 1 \frac{5}{6} \div \frac{3}{4} \) | \( 1 \frac{5}{6} \times \frac{4}{3} = \frac{44}{18} \) | \( 2 \frac{8}{18} = 2 \frac{4}{9} \) |
---|---|---|
| \( 1 \frac{5}{6} \) | \( \frac{44}{18} \) | \( 2 \frac{4}{9} \) |
| \( 1 \frac{5}{6} \times \frac{4}{3} = \frac{44}{18} \) | \( \frac{44}{18} \) | \( 2 \frac{4}{9} \) |

### Example 3: \( 12 \div 2 \frac{3}{8} \)

| \( 12 \div 2 \frac{3}{8} \) | \( 12 \div 19/8 \) | \( 12 \div 19/8 = 96/19 \) |
---|---|---|
| \( 12 \) | \( 19/8 \) | \( 96/19 \) |
| \( 12 \div 19/8 = 96/19 \) | \( 96/19 \) | \( 96/19 \) |

---

**Vocabulary**

**Numerator:** the top number in a fraction.

**Denominator:** the bottom number in a fraction.

**Reciprocals** are pairs of numbers when multiplied together equal 1.

**Factor:** a number that divides evenly into another number.
“Dividing fractions— (flip) or inverse the second and multiply.”

Example:
\[ \frac{1}{2} \div \frac{3}{8} \text{ Inverse } \frac{3}{8} \rightarrow \frac{8}{3} \]

Then Multiply \( \frac{1}{2} \times \frac{8}{3} \)

\[ \frac{3}{8} \rightarrow \frac{8}{3} \quad 3/8 \times 8/3 = \frac{24}{24} = 1 \]

These two numbers are reciprocals of each other, because when they are multiplied together, they equal 1.

Now You Try!

1. \( \frac{4}{5} \div \frac{1}{7} = \)

2. \( \frac{12}{15} \div \frac{3}{5} = \)

3. \( \frac{7}{8} \div \frac{1}{6} = \)

4. \( \frac{1}{1} \div \frac{1}{5} = \)

5. \( 8 \div \frac{1}{4} = \)

6. \( 2 \frac{1}{4} \div \frac{1}{6} = \)

7. \( 10 \div 3 \frac{1}{3} = \)

8. \( 12 \frac{1}{3} \div 2 = \)
## Changing Fractions to Decimals

### Change \(\frac{3}{4}\) to a decimal

**Steps:**
1. Change the fraction into a division problem.
2. Add a decimal point after the 3 and add two zeros.
   - Remember to raise the decimal into the quotient area.
3. This is terminating decimal; therefore adding additional zeros is not necessary.

### Change \(\frac{5}{8}\) to a decimal

**Steps:**
1. Change the fraction into a division problem.
2. Add a decimal point after the 5 and add two zeros.
   - Remember to raise the decimal into the quotient area.
3. If there is still a remainder, add another zero to the dividend and bring it down.
4. The decimal terminates at the thousandths place.

**Vocabulary:**
- Fractions bar: the line in-between the numerator and denominator.
- The bar is another symbol for division.
- Terminating decimal: a decimal that is not continuous.

**HESI Hints:**
- “Top goes in the box, the bottom goes out.”

This is a helpful saying in remembering that the numerator is the dividend and the denominator is the divisor.
- If the decimal does not terminate, continue to the thousandths place and then round to the hundredths place.

**Example:**
7.8666 \(\rightarrow\) 7.87

If the number in the thousandths place is 5 or greater, round the number in the hundredths place to the next higher number.
But, if the number in the thousandths place is less than 5, do not round up the number in the hundredths place.
<table>
<thead>
<tr>
<th>Change 2/3 to a decimal</th>
<th>Steps:</th>
<th>Now You Try!</th>
</tr>
</thead>
</table>
| 0.6666 3|2|0.0000 | 1. Change the fraction into a division problem.  
| -1 | 8 | 20 | 2. After the 2, add a decimal point and 4 zeros.  
| -1| 8| 20 | 3. The decimal continues (does not terminate); therefore, round to the hundredths place:  
| -1| 8| 20 | o 0.6666|0.67  
| -1| 8| 20 | o It can also be written as 0.6 (the line is placed over the number that repeats)  
| 0.67 | | |

<table>
<thead>
<tr>
<th>Change 2 3/5 to a decimal</th>
<th>Steps:</th>
<th>Now You Try!</th>
</tr>
</thead>
</table>
| 0.60 5|3|0.00 | 1. Change the fraction into a division problem.  
| -3| 0| 00 | 2. After the 3, add a decimal and two zeros.  
| -3| 0| 00 | 3. Place the whole number in front of the decimal:  
| -3| 0| 00 | o 2.6  
| 2.6 | | |

<table>
<thead>
<tr>
<th>Now You Try!</th>
<th>Change the fraction into a decimal.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 1/5</td>
<td></td>
</tr>
<tr>
<td>2. 2/5</td>
<td></td>
</tr>
<tr>
<td>3. 3/8</td>
<td></td>
</tr>
<tr>
<td>4. 4/5</td>
<td></td>
</tr>
<tr>
<td>5. 1/3</td>
<td></td>
</tr>
<tr>
<td>6. 1 ½</td>
<td></td>
</tr>
<tr>
<td>7. 3/10</td>
<td></td>
</tr>
<tr>
<td>8. 2 7/8</td>
<td></td>
</tr>
</tbody>
</table>
Changing Decimals to Fractions

Change 0.9 to a fraction

Steps:
Knowing place values makes it very simple to change decimals to fractions.
1. The last digit is located in the tenths place; therefore the 9 becomes the numerator.
2. 10 becomes the denominator.

Vocabulary:
Place value: Numbers to the right of the decimal point have different terms from the whole numbers.

Change 0.02 to a fraction

Steps:
1. The 2 is located in the hundredths place.
2. 2 becomes the numerator, 100 becomes the denominator.
3. Reduce the fraction.

Change 0.25 to a fraction

Steps:
1. The 5 (always look at the last digit in the decimal) is located in the hundredths place.
2. 25 becomes the numerator and 100 becomes the denominator.
3. Reduce the fraction.

Change 3.055 into a fraction

Steps:
1. The rightmost 5 is located in the thousandths place.
2. 55 becomes the numerator and 1000 becomes the denominator. The 3 is still the whole number.
3. Reduce the fraction.

Now You Try!

1. 0.08
2. 0.025
3. 0.125
4. 0.17
5. 0.3
6. 2.75
7. 7.07
8. 12.0001
Math Review

Directions:
1. Take the portion of the test that follows. Label and do all work on front and back of same page as problem.
2. See pages 42-44 for answer key, to score portion.
3. Provide the following information hereon (page 21) for tutor- and self-evaluation:

Total number of problems: 8
Ratio/Proportion
Number correct: ______ Multiply number correct X 100=

Divide by total number of problems= ____________%

Tutor will review for areas to work on in math.

Areas to work on: __________, __________, __________, __________.

Next step: Go to Math Review,
Then Practice Tests 1 & 2
Ratio and Proportion

Change the decimal to a ratio

Steps:
1. Change the decimal to fraction.
2. Reduce the fraction.
3. The numerator is the first listed number.
4. Then write the colon.
5. Finally, place the denominator after the colon.

\[
0.025 \rightarrow \frac{25}{1000} \rightarrow \frac{1}{40} \\
\rightarrow 1:40
\]

Change the fraction to a ratio

5/6 = 5:6

Steps:
1. The numerator is the first listed number.
2. Then write the colon
3. Finally, place the denominator after the colon.

Solve the proportion (find the value of x)

Steps:
1. Rewrite the proportion as a fraction. (this might help to see the solution).
2. Notice that 7 x 2 = 14; therefore 10 x 2 = 20:
   - Multiply 14 x 10 (two diagonal numbers). The answer is 140.
   - 140 ÷ 7 (divide by number without a pair. 14 and 10 are a pair. 7 and x are not pair, so divide by 7)
3. The answer is 20.

\[
7:10::14:x
\]

X: 63:: 24:72

Steps:
1. Rewrite the proportion as a fraction.
2. Multiply the diagonal numbers together:
   - 24 x 63 = 1,512
3. Divide the answer (1,512) by the Remaining number (the one with out a pair) 1,512 ÷ 72 =21
4. The answer is 21

\[
\frac{240}{60}\rightarrow \frac{x}{12} \\
x = 48
\]

Solve the proportion

Steps:
1. Rewrite the proportion as a fraction.
2. Multiply the diagonal numbers together:
   - 240 x 12 = 2,880
3. Divide the answer (2,880) by the remaining number (without a pair)
   - 2,880 ÷ 60 = 48
4. The answer to x is 48.
**Vocabulary:**

**Ratio:** a relationship between two numbers.

**Proportion:** two ratios that have equal values.

**HESI Hints:**

Ratios can be written several ways.

- As a fraction 5/12
- Using a colon 5:12
- In words 5 to 12

Proportion can be written two ways.

- $5 = \frac{25}{12} = 60$
- 5:12::25:60

(Remember, the numerator is listed first, then the denominator)

**Now You Try!**

1. $\frac{22}{91}$
2. $\frac{19}{40}$

Solve for X

3. $7: 5 :: 91: X$
4. $7: 9 :: X: 63$
5. $X: 15 ::120: 225$
6. $15: X :: 3: 8$
7. $360: 60 :: 6: X$
8. $X: 81 :: 9: 27$
Math Review

Directions:
1. Take the portion of the test that follows. Label and do all work on front and back of same page as problem.
2. See pages 42-44 for answer key, to score portion.
3. Provide the following information hereon (page 21) for tutor- and self-evaluation:

Total number of problems: 8 Percentage
Number correct: ______ Multiply number correct X 100=_________
Divide by total number of problems= ___________%

Tutor will review for areas to work on in math.

Areas to work on: ________, ________, ________, ________.

Next step: Go to Math Review, Then Practice Tests 1 & 2
## Percentages

<table>
<thead>
<tr>
<th>Change the decimal to a percent</th>
<th>Steps:</th>
<th>Vocabulary:</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.13 → 13%</td>
<td>1. Move the decimal point to the right of the hundredths place (two places). 2. Put the percent sign behind the new number.</td>
<td>Percent: per-hundred (part per hundred)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Change the decimal to a percent</th>
<th>Steps:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0.002 → 0.2%</td>
<td>1. Move the decimal point to the right of the hundredths place (two places-always!) 2. Put the percent sign behind the new number. Do not worry. It is still a percent- it is just a very small percent.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Change the percent to a decimal</th>
<th>Steps:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>85.4% → .854</td>
<td>1. Move the decimal two spaces away from the percent sign (towards the left). 2. Drop the percent sign; it is no longer a percent, but a decimal.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Change the percent to a decimal</th>
<th>Steps:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>75% → .75</td>
<td>1. The decimal point is not visible, but is always located after the last number. 2. Move the decimal two spaces away from the percent sign (towards the left). 3. Drop the percent sign; it is no longer a percent, but a decimal.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Changing a fraction to a percent</th>
<th>Steps:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$\frac{5}{6}$ → .833</td>
<td>1. Change the fraction into a division problem and solve. 2. Move the decimal behind the hundredths place in the quotient. 3. Place a percent sign after the new number.</td>
<td></td>
</tr>
</tbody>
</table>

### Now You Try!

**Decimal to a percent**

1. .98
2. .0068
3. .09

**Percent to a decimal**

4. 58%
5. 76.3%
6. .03%

**Fraction to a percent**

7. 9/10
8. 4/5
**Percentage**  
(using the percent formula)

| What is 7 out of 8 as a percent? | **Steps:**  
|----------------------------------|--------------------------------------------------  
| 7 = %  
8 = 100  
  - 7 x 100 = 700  
  - 700 ÷ 8 = 87.5 %  
% = 87.5 or 87.5 % | 1. Rewrite the problem using the percent formula.  
2. Multiply the diagonal numbers together:  
   1 x 100 = 700  
3. Divide by the remaining (without a pair) number:  
   700 ÷ 8 = 87.5 %  

| What is 68% of 45? | **Steps:**  
|--------------------|--------------------------------------------------  
| X = 68  
45 = 100  
  - 45 x 68 = 3,060  
  - 3,060 ÷ 10 = 30.6 | 1. Rewrite the problem using the percent formula.  
2. (of 45) 45 is the whole.  
3. Multiply the diagonal numbers together.  
   68 x 45 = 3,060  
4. Divide by the remaining (without pair) number  
   3,060 ÷ 100 = 30.6  
5. x = 30.6 (this is not a percent- it is the part).  

| 18 is 50% of what number? | **Steps:**  
|--------------------------|--------------------------------------------------  
| 18 = 50  
X = 100  
  - 18 x 100 = 1,800  
  - 1,800 ÷ 50 = 36 | 1. Rewrite the problem using the percent formula.  
2. We are looking for the whole because “of” is indicating an unknown number.  
3. Multiply the diagonal numbers together:  
   18 x 100 = 1,800  
4. Divide by the remaining number:  
   1,800 ÷ 50 = 36  

**HESI Hints:**  
Percent formula  

| Part = %  
Whole = 100 |  
|--------------|--------------------------------------------------  

Using this formula will help in all percent problems where there is an unknown (solving for x)  

**Now You Try!**

1. What is 15 out of 75 as a percent?  
2. What is 2 out of 50 as a percent?  
3. What is 20 out of 100 as a percent?  
4. What is 28% of 100?  
5. What is 95% of 20?  
6. What is 15.5% of 600?  
7. 2 is 20% of what number?  
8. 65 is 25% of what number?
Helpful Information to Memorize and Understand
Fractions, Decimals, Percents

<table>
<thead>
<tr>
<th>Fractions</th>
<th>Decimals</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\frac{1}{2}$</td>
<td>0.50</td>
<td>50%</td>
</tr>
<tr>
<td>$\frac{1}{4}$</td>
<td>0.25</td>
<td>25%</td>
</tr>
<tr>
<td>$\frac{3}{4}$</td>
<td>0.75</td>
<td>75%</td>
</tr>
<tr>
<td>$\frac{1}{5}$</td>
<td>0.20</td>
<td>20%</td>
</tr>
<tr>
<td>$\frac{2}{5}$</td>
<td>0.40</td>
<td>40%</td>
</tr>
<tr>
<td>$\frac{3}{5}$</td>
<td>0.60</td>
<td>60%</td>
</tr>
<tr>
<td>$\frac{4}{5}$</td>
<td>0.80</td>
<td>80%</td>
</tr>
<tr>
<td>$\frac{1}{8}$</td>
<td>0.125</td>
<td>12.5%</td>
</tr>
<tr>
<td>$\frac{3}{8}$</td>
<td>0.375</td>
<td>37.5%</td>
</tr>
<tr>
<td>$\frac{5}{8}$</td>
<td>0.625</td>
<td>62.5%</td>
</tr>
<tr>
<td>$\frac{7}{8}$</td>
<td>0.875</td>
<td>87.5%</td>
</tr>
<tr>
<td>$\frac{1}{3}$</td>
<td>$0.33 \overline{3}$</td>
<td>33.3%</td>
</tr>
<tr>
<td>$\frac{2}{3}$</td>
<td>$0.66 \overline{6}$</td>
<td>66.6%</td>
</tr>
</tbody>
</table>
Helpful Information to Memorize and Understand

Roman Numerals

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>1</td>
<td>XI</td>
</tr>
<tr>
<td>II</td>
<td>2</td>
<td>XX</td>
</tr>
<tr>
<td>III</td>
<td>= 3</td>
<td>XXX</td>
</tr>
<tr>
<td>IV</td>
<td>4</td>
<td>XL</td>
</tr>
<tr>
<td>V</td>
<td>5</td>
<td>L</td>
</tr>
<tr>
<td>VI</td>
<td>6</td>
<td>LX</td>
</tr>
<tr>
<td>VII</td>
<td>= 7</td>
<td>LXX</td>
</tr>
<tr>
<td>VIII</td>
<td>= 8</td>
<td>LXXX</td>
</tr>
<tr>
<td>IX</td>
<td>9</td>
<td>XC</td>
</tr>
<tr>
<td>X</td>
<td>10</td>
<td>C</td>
</tr>
</tbody>
</table>

Example: 2003 = MMIII

Measurement Conversions

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Metric</th>
<th>Customary</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 degrees Celsius</td>
<td>32 degrees Fahrenheit (the freezing point of water)</td>
<td></td>
</tr>
<tr>
<td>100 degrees Celsius</td>
<td>212 degrees Fahrenheit (the boiling point of water)</td>
<td></td>
</tr>
<tr>
<td>Length</td>
<td>1 kilometer = 1,000 meters</td>
<td>1 mile = 1,760 yards</td>
</tr>
<tr>
<td></td>
<td>1 meter = 100 centimeters</td>
<td>1 mile = 5,280 feet</td>
</tr>
<tr>
<td></td>
<td>1 centimeter = 10 millimeters</td>
<td>1 yard = 3 feet</td>
</tr>
<tr>
<td></td>
<td>1 foot = 12 inches</td>
<td></td>
</tr>
<tr>
<td>Volume &amp; Capacity</td>
<td>1 liter = 1,000 milliliters</td>
<td>1 gallon = 4 quarts</td>
</tr>
<tr>
<td></td>
<td>1 milliliter = 1 cubic centimeter</td>
<td>1 gallon = 128 ounces</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 quart = 2 pints</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 pint = 2 cups</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 cup = 8 ounces</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 ounce = 30 cubic centimeters</td>
</tr>
<tr>
<td>Weight &amp; Mass</td>
<td>1 kilogram = 1,000 grams</td>
<td>1 ton = 2000 pounds</td>
</tr>
<tr>
<td></td>
<td>1 gram = 1,000 milligrams</td>
<td>1 pound = 16 ounces</td>
</tr>
</tbody>
</table>
Answer Key:
Mathematics Section

Basic addition and subtraction (enter scores on pg. 10)
1. 1,959 2. 980 3. 1,511 4. 200
5. 432 6. 459 7. 108 8. 12,011

Basic Multiplication (whole numbers) (enter scores on pg.10)
1. 5,922 2. 1,950 3. 7,836 4. 44,330
5. 11,130 6. 21,978 7. 189,150 8. 1,557,270

Basic Division (whole numbers) (enter scores on pg. 10)
1. 12 2. 3,206 3. 1,233 4. 25
5. 628 6. 741 7. 214.75 8. 998.14

Addition and Subtraction of Decimals (enter scores on pg. 16)
1. 16.75 2. 66.838 3. 948.2 4. 25.26
5. 30.05 6. 10.45 7. 29.41 8. 12.57

Basic Multiplication (decimals)(enter scores on pg 16)
1. 0.01269 2. 786.08 3. 16.863 4. 6252.5
5. 0.287804 6. 32.92 7. 3.7236 8. 0.79423

Division of Decimals (enter scores on pg. 16)
1. 120 2. 240 3. 9.375 4. 281
5. 8.23 6. 1,970 7. 0.9 8. 1.2

Addition of Fractions (enter scores on pg. 16)
1. 1/2 2. 17/21 3. 1 3/10 4. 13/14
5. 1 23/35 6. 9 11/24 7. 6 4/9 8. 15 8/12

Subtraction of Fractions (enter scores on pg.21)
1. 1/20 2. 11/37 3. 2/25 4. 1/54
5. 1 7/10 6. 15 1/18 7. 12 3/7 8. 16 3/4

Multiplication of Fractions (enter scores on pg. 21)
1. 2/5 2. 7/81 3. 4 4/5 4. 7
5. 3 3/4 6. 8 7. 6 2/3 8. 7 1/2
Division of fractions (enter scores on pg. 21)
1. 5 3/5  2. 1 1/3  3. 5 1/4  4. 5
5. 32  6. 13 1/2  7. 3  8. 6 1/6

Changing Fractions to Decimals (enter scores on pg. 21)
1. 0.2  2. 0.4  3. 0.375  4. 0.8
5. 0.3  6. 1.5  7. 0.3  8. 2.875

Changing Decimals to Fractions (enter scores on pg 21)
1. 2/25  2. 1/40  3. 1/8  4. 17/1000
5. 3/10  6. 2 3/4  7. 7 7/100  8. 12 1/10000

Ratio and Proportions (enter scores on pg 34)
1. 22:91  2. 19:40  3. x = 65  4. x = 49
5. x = 8  6. x = 40  7. x = 1  8. x = 27

Percentages (enter scores on pg. 37)
1. 98%  2. 0.68%  3. 9%  4. .58
5. 0.763  6..0003  7. 90%  8. 80%

Percentages (using the percent formula) (enter scores on pg. 37)
1. 20%  2. 4%  3. 20%  4. .28
5. 19  6. 93  7. 10  8. 260

See page 9 to enter overall score.
Math Practice
Test 1 Face Sheet

Directions: Students will

1. Take Practice Test 1
2. Correct all problems
3. Fill in information on this face sheet, which precedes entire Practice Test 1
4. Return work to HESI staff, arrange tutoring or conference to give go-ahead on taking actual HESI test

Important

1) Use the space provided on the paper for scratch paper; all work should be done on these pages for ease of assessment.
2) Fill in the blanks on the face sheet to assist the HESI staff in assessing your skills and weaknesses.

Your goal is to achieve 80% minimum on any exercise.

¾ To calculate Total number of correct answers, subtract number of incorrect answers from total number of problems.
¾ To calculate Percent correct: multiply number correct X 100, divide this number by total number of problems.

Example: 80 correct out of 100: 80 X 100= 8000 8000 divided by 100 = 80 or 80%

OVERALL MATH PRACTICE TEST 1 SCORE

Total number of problems: 101
Number correct: ________ Multiply number correct X 100 = ________
Divide by total number of problems= _____%

Tutor will review for areas to work on in math.

Areas to work on: ________, ________, ________, ________.
MATH PRACTICE
TEST 1

1. Add, subtract, multiply, divide:

Total number of problems: 18
Total number of correct answers X 100= Divide this number by total number of problems.
Percent correct

2. Multiply, divide (by and into), add, subtract decimals

Total number of problems: 15
Total number of correct answers X 100= Divide this number by total number of problems.
Percent correct

3. Change fractions to decimals; decimals to fractions

Total number of problems: 10
Total number of correct answers X 100= Divide this number by total number of problems.
Percent correct

4. Add, subtract, multiply, divide fractions

Total number of problems: 20
Total number of correct answers X 100= Divide this number by total number of problems.
Percent correct

5. Percentage

Total number of problems: 18
Total number of correct answers X 100= Divide this number by total number of problems.
Percent correct

6. Ratio/Proportion

Total number of problems: 9
Total number of correct answers X 100= Divide this number by total number of problems.
Percent correct

7. Conversions

Total number of problems: 5
Total number of correct answers X 100= Divide this number by total number of problems.
Percent correct
8. Rounding

Total number of problems: 6
Total number of **correct** answers ___ X 100= ___ Divide this number by total number of problems. Percent correct___________

**Next step:** go to page 44 to enter overall score for Practice Test 1; then go to Practice Test 2.
These problems will help you find out if you need to work in the whole number section of this book. Do all the problems you can. Then fill in the chart on page 6 to see which page you should go to next.

1. 86,147 + 2,532
2. 24 + 933 =
3. 573 1,268 486 +3,691

4. 897 -357
5. 826 - 259
6. 40,020 -29,316

7. 2,306 – 728 =
8. 30,000 – 2,907 =
9. 613 x 132

10. 84 x56
11. 427 x 395
12. 489 x 53 =

13. 65 x 2,507 =
14. 331 ÷ 7 =
15. 3,147 ÷ 4 =

16. 1,029 ÷ 21 =
17. 6,057 ÷ 9 =
18. 2,433 ÷ 56 =
**Answer Key**

1. 88,679
2. 957
3. 6,018
4. 540
5. 567
6. 10,704
7. 1,578
8. 27,093
9. 80,916
10. 4,704
11. 168,665
12. 25,917
13. 162,955
14. 47 r2
15. 786 r 3
16. 49
17. 673
18. 43 r 25

Enter Score for practice test I on face sheet pages 44 – 46.
Do work on these pages.

1. \(.26 \times 3.9 = \)  
2. \(12.9 \times 5 = \)  
3. \(.0038 \times 62 = \)

4. \(.417 \times 2.3 = \)  
5. \(46.4 \div 16 = \)  
6. \(.222 \div .6 = \)

7. \(.406 \div .07 = \)  
8. \(9 \div .18 = \)  
9. \(148 \div 3.7 = \)

10. \(.58 + .9 + .737 = \)  
11. \(.13 + 23.8 + 14 = \)  
12. \(.68 + 10.24 + 5 = \)

13. \(3.4 - .75 = \)  
14. \(8.1 - .238 = \)  
15. \(12 - .608 = \)
1. 1.014
2. 64.5
3. .2356
4. .9591
5. .37
6. 5.8
7. 50
8. 40
9. 2.217
10. 37.93
11. 15.92
12. 2.65
13. 7.862
14. 11.392

Enter score for Practices Test 1 part 2 on face sheets page 44-46.
Do all work on these pages. Change each fraction to a decimal.

1. \( \frac{5}{6} = \)
2. \( \frac{9}{20} = \)
3. \( \frac{4}{7} = \)
4. \( \frac{5}{8} = \)
5. \( \frac{9}{16} = \)

Change each decimal or mixed decimal to a fraction or mixed number. Reduce each fraction.

1. \( .08 = \)
2. \( .625 = \)
3. \( .48 = \)
4. \( 3.36 = \)
5. \( 2.00004 = \)
Answer Key

1. .83 1/3
2. .45
3. .57 1/7
4. .62 ½ or .625
5. .56 ¼

1. 2/25
2. 5/8
3. 12/25
4. 3 9/25
5. 2 1/25,000

Enter score for practices test 1 part 3 on face sheets page 44 – 46.
Do all work on these pages.

1. \( \frac{3}{8} + \frac{3}{8} = \)

2. \( \frac{3}{9} + \frac{11}{16} = \)

3. \( \frac{5}{9} + \frac{2}{3} = \)

4. \( \frac{3}{7} + \frac{1}{2} = \)

5. \( \frac{9}{10} - \frac{7}{10} = \)

6. \( \frac{5}{8} - \frac{1}{3} = \)

7. \( 7.6 - 2 \frac{5}{9} = \)

8. \( 8 \frac{1}{5} - 2 \frac{4}{5} = \)

9. \( 9.74 - 9 \frac{5}{6} = \)

10. \( \frac{5}{9} \times \frac{2}{3} = \)

11. \( \frac{9}{10} \times \frac{8}{9} = \)

12. \( \frac{5}{9} \times 12 = \)

13. \( 15 \times 4 \frac{2}{3} = \)

14. \( \frac{3}{5} \times 1 \frac{1}{9} = \)

15. \( 2 \frac{1}{4} \times 4 \frac{2}{3} = \)

16. \( \frac{4}{5} \div \frac{8}{15} = \)

17. \( 4 \frac{1}{6} \div \frac{5}{9} = \)

18. \( \frac{5}{12} \div 10 = \)

19. \( 6 \div 4 \frac{1}{2} = \)

20. \( 3 \frac{1}{2} \div 2 \frac{4}{5} = \)
Answer Key

1. $\frac{3}{4}$
2. $6 \frac{1}{4}$
3. $\frac{2}{9}$
4. $\frac{13}{14}$
5. $\frac{1}{5}$
6. $\frac{7}{24}$
7. $3 \frac{4}{9}$
8. $5 \frac{2}{5}$
9. $2 \frac{11}{18}$
10. $\frac{10}{27}$
11. $\frac{4}{5}$
12. $6 \frac{2}{3}$
13. $70$
14. $\frac{2}{3}$
15. $10 \frac{1}{2}$
16. $1 \frac{1}{2}$
17. $7 \frac{1}{2}$
18. $\frac{1}{24}$
19. $1 \frac{1}{3}$
20. $1 \frac{1}{4}$

Enter score for practice test on cover sheets 44-46.
These problems will help you find out if you need to work in the percent section of this book. Do all the problems you can. When you are finished, look at the chart to see which page you should go to next.

1. Change each decimal to a percent.

0.6 = 0.06 = 0.248 = 0.03 1/3

2. Change each percent to a decimal.

50% = 7% = 5 1/4% = 325%

3. Change each fraction to a percent.

3/10 = 1/8 = 3/7 = 4/25 =

4. 15% of 140 = 5. 90% of 60 =

6. 72 is what % of 90? 7. 44 is what % of 132?

8. 90% of what number is 54? 9. 15% of what number is 39?
Answers to Step One to Percent Skill Practice Test 1, Part 5

1. 60% 2. .5 or .50 3. 30%
6% .07 12 ½%
or 12.5%
24.8% .0525 42 6/7%
or 42.85%
3.3% 3.25% 16%

4. 21 5. 54 6. 80%
7. 33 1/3% or 33.3%
8. 60
9. 260

Enter score for 5 on pages 44-46
Solve these proportions.

1. \( \frac{120}{4.2} = \frac{16}{X} \)  \hspace{1cm} 2. \( \frac{750}{250} = \frac{X}{5} \)  \hspace{1cm} 3. \( \frac{2}{5} = \frac{X}{10} \)  

4. \( \frac{0.125}{0.5} = \frac{X}{10} \)

Read the following:

**Proportion**

Let us consider the ratios 3:5 and 12:20. If we write these ratios in fraction form, we have \( \frac{3}{5} \) and \( \frac{12}{20} \). Now if we apply the Principle of Equivalency of Fractions, we have \( 3 \times 20 = 5 \times 12 \). Thus the fraction \( \frac{3}{5} \) and \( \frac{12}{20} \) are equivalent.

Thus, we may write \( 3:5 = 12:20 \). This statement is called a proportion.

**Definition:** A *proportion* is a statement that two ratios are equivalent.

Example: (a) \( 1:2 = 4:8 \)  
(b) \( 5:6 = 15:18 \)

Use the Principle of Proportion to determine which of the following are true proportions.

1. \( 5:7 = 15:21 \)
2. \( 6:11 = 12:24 \)
3. \( 1.4:3.5 = 4.6:11.5 \)
4. \( 63:81 = 77:99 \)
5. \( 64:28 = 96:40 \)
Convert the measurements in the following problems.

1. 5 yards = _______________ feet
2. 40 ounces = _______________ pounds
3. 20 quarts = _______________ gallons
4. 2 quarts = _______________ ounces
5. 3 pints = _______________ quarts
Answer Key

Answers for test 6: (Enter scores for 6 on face sheet page 44-46)

1. .56 1. True
2. 15 2. False
3. 4 3. True
4. 25 4. True
5. False

Answers for test 7: (Enter the scores for 7 on face sheet pages 44-46)

1. 15 ft
2. 2.5 lbs
3. 5 gals
4. 64 oz
5. 1.5 qt
You round dollars and cents in the same way you round whole numbers. You can round a monetary amount to the nearest ten cent (dime), nearest dollar, nearest ten dollars, and so on.

Example: Round $15.76 to the nearest dime.

Step 1. Underline the digit in the dimes column. $15.76

Step 2. Look at the digit to the right of the 7. Since the digit 6 is more than 5, add 1 to the digit 7. $15.80

Step 3. Now put zeros in all the places to the right of the 8. $15.80

Answer: $15.80

Round each number below as indicated.

1. 76 (tens place)
2. 164 (hundreds place)
3. 2,590 (thousands place)
4. $0.37 (nearest dime)
5. $3.48 (nearest dollar)
6. $67.09 (nearest ten dollar)
Answer Key

1. 80
2. 200
3. 3,000
4. $0.40
5. $3.00
6. $70.00

Enter score for 8 on face sheet pages 45-47
Math Practice
Test 2 Face Sheet

**Directions:** Students will

1. Take Practice Test 2
2. Correct all problems
3. Fill in information on this face sheet, which *precedes* entire Practice Test 2
4. Return work to HESI staff, arrange tutoring or conference to give go-ahead on taking actual HESI test

**Important:**

1) Use the space provided on the paper for scratch paper; all work should be done on these pages for ease of assessment.
2) Fill in the blanks on the face sheet to assist the HESI staff assessing your skills and weaknesses.

Your goal is to achieve 80% minimum on any exercise.

¾ To calculate Total number of **correct** answers, subtract number of incorrect answers from total number of problems.
¾ To calculate Percent correct: multiply number correct X 100, divide this number by total number of problems.

Example: 80 correct out of 100: 80 X 100 = 8000 8000 divided by 100= 80 or 80%

**OVERALL MATH PRACTICE TEST 2 SCORE**

Total number of problems: 83
Number correct:________ Multiply number correct X 100=________
Divide by total number of problems=______%

Tutor will review for areas to work on in math.

Areas to work on:________,_________,_________,_________.
MATH PRACTICE TEST 2

Add, subtract, multiply, divide:

Total number of problems __16__
Total number of correct answers ____ X100=_____ Divide this number by total number of problems
Percent correct ____________

Change decimals to fractions; change fractions to decimals; Multiply, divide (by and into), add, subtract decimals

Total number of problems __15__
Total number of correct answers ____ X100=_____ Divide this number by total number of problems
Percent correct ____________

Add, subtract, multiply, divide fractions

Total number of problems __16__
Total number of correct answers ____ X100=_____ Divide this number by total number of problems
Percent correct ____________

Percentage

Total number of problems __15__
Total number of correct answers ____ X100=_____ Divide this number by total number of problems
Percent correct ____________

Ratio/ Percentage

Total number of problems __11__
Total number of correct answers ____ X100=_____ Divide this number by total number of problems
Percent correct ____________

Conversion

Total number of problems __5__
Total number of correct answers ____ X100=_____ Divide this number by total number of problems
Percent correct ____________

Rounding

Total number of problems __5__
Total number of correct answers ____ X100=_____ Divide this number by total number of problems
Percent correct ____________
1. \( 425 + 34 = \)

2. \( 732 + 9,255 = \)

3. \( 6,927 + 434 + 56 = \)

4. \( 83 - 9 = \)

5. \( 800 - 73 = \)

6. \( 12,603 - 9258 = \)

7. \( 90,000 - 4,782 = \)

8. \( 62 \times 34 = \)

9. \( 536 \times 273 = \)

10. \( 2,706 \times 75 = \)

11. \( 39 \times 4,086 = \)

12. \( 196 \div 4 = \)

13. \( 779 \div 9 = \)

14. \( 4,836 \div 52 = \)

15. \( 7,224 \div 9 = \)

16. \( 4,662 \div 63 = \)
Answer Key: Test 2 Part 9

1. 459
2. 9,987
3. 7,417
4. 74
5. 727
6. 3,345
7. 85,218
8. 2,108
9. 146,328
10. 202,950
11. 159,354
12. 49
13. 86 r5
14. 93
15. 802 r6
16. 74
Change each decimal or mixed decimal to a fraction or mixed number. Reduce each fraction.

1. \(0.3=\)
2. \(3.75=\)
3. \(0.625=\)
4. \(9.32=\)
5. \(\frac{1}{5}=\)
6. \(\frac{1}{8}=\)
7. \(\frac{4}{25}=\)
8. \(\frac{3}{50}=\)
9. \(0.29 + 0.8 + 0.626=\)
10. \(0.0052 + 0.84 + 0.072=\)
11. \(0.26 + 14.7 + 13=\)
12. \(18 + 0.049 + 2.38=\)
13. \(0.8 - 0.29=\)
14. \(6.2 - 0.127=\)
15. \(0.11 - 0.509=\)
16. \(8.3 - 2.052=\)
17. \(4.3 \times 0.38=\)
18. \(18 \times 0.0074=\)
19. \(6.5 \times 0.329=\)
20. \(110.4 \div 23=\)
21. \(0.621 \div 0.09=\)
22. \(54 \div 27=\)
23. \(138 \div 4.6=\)
**Answer Key:**

*Test 2 Part 10*

1. 3/10
2. 3 3/4
3. 5/8
4. 9 8/25
5. .2
6. .12 ½ or .125
7. .16
8. .06
9. 1.716
10. .9172
11. 27.96
12. 20.429
13. .51
14. 6.073
15. 10.491
16. 6.248
17. 1.634
18. .1332
19. 2.1385
20. 4.8
21. 6.9
22. 200
23. 30
1. \( \frac{7}{10} + \frac{1}{10} = \)

2. \( \frac{8}{15} + \frac{4}{5} = \)

3. \( \frac{1}{2} + \frac{5}{9} = \)

4. \( \frac{3}{2} + \frac{3}{8} + \frac{5}{14} = \)

5. \( \frac{11}{16} - \frac{5}{16} = \)

6. \( \frac{3}{5} - \frac{1}{6} = \)

7. \( 9 - \frac{4}{3} \frac{1}{2} = \)

8. \( 8 \frac{2}{5} - 2 \frac{2}{3} = \)

9. \( 9 \frac{1}{4} - 4 \frac{7}{12} = \)

10. \( \frac{3}{8} \times \frac{5}{7} = \)

11. \( \frac{5}{12} \times \frac{4}{5} = \)

12. \( 8 \times \frac{7}{10} = \)

13. \( 1 \frac{5}{7} \times 4 \frac{2}{3} = \)

14. \( \frac{3}{10} \div 2 \frac{1}{5} = \)

15. \( 3 \frac{3}{4} \div 5 \frac{1}{6} = \)

16. \( 7 \frac{7}{8} \div 3 = \)
Answer Key: Test 2 Part 11

1. 4/5
2. 1 1/3
3. 1 1/18
4. 13 13/24
5. 3/8
6. 13/30
7. 4 7/12
8. 5 11/15
9. 4 2/3
10. 15/56
11. 1/3
12. 5 3/5
13. 8
14. 3/4
15. 4 1/2
16. 7/24
1. Change each decimal to a percent.
   
   \[ .3 = \quad .09 = \quad .455 = \]

2. Change each percent to a decimal.
   
   \[ 48\% = \quad 3\% = \quad 7 \frac{1}{2}\% = \]

3. Change each fraction to a percent.
   
   \[ \frac{9}{10} = \quad \frac{5}{12} = \quad \frac{4}{5} = \]

SOLVE

4. 16\% of 125 =

5. 40\% of 75 =

6. 4.8\% of 800 =

7. 45 is what \% of 75?

8. 36 is what \% of 54?

9. 48\% of what number is 60?
## Answer Key:
### Test 2 part 12

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<table>
<thead>
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<tbody>
<tr>
<td>1</td>
<td>30%</td>
<td>9%</td>
<td>45.5%</td>
</tr>
<tr>
<td>2</td>
<td>.48</td>
<td>.03</td>
<td>.07 ½</td>
</tr>
<tr>
<td>3</td>
<td>90%</td>
<td>41 2/3%</td>
<td>80%</td>
</tr>
<tr>
<td>4</td>
<td>20</td>
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<td>5</td>
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<tr>
<td>6</td>
<td>38.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>60%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>66 2/3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>125</td>
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</tr>
</tbody>
</table>
In each of the following, what number should replace \( n \) to make each a true proportion?

1. \( n : 4 = 12 : 8 \)

2. \( 5 : 8 = 35 : n \)

3. \( 17 : n = 6 : 8 \)

4. \( 7 : n = 11 : 18 \)

5. \( 15 : 35 = 4 : n \)

6. \( 1/6 = ?/ 18 \)

7. \( 3/ ? = 6/8 \)

8. \( 50/ ? = 1/2 \)

9. \( 8/9 = ? /27 \)
Answer Key:
Test 2 Part 13

1. 6
2. 56
3. 22 2/3
4. 11 5/11
5. 9 1/3
6. 3
7. 4
8. 100
9. 24
Converting Units Practice Test 2 part 14

Change each quantity to the unit indicated. As your first step in each problem identify the correct factor.

1. 3 lbs = ________ oz.
2. 3 qt. = ________ pt.
3. 12 pt. = ________ qt.
4. 80 oz. = ________ lb.

Many times, when smaller units are converted to larger units, there is a remainder.

As the example below show, this remainder is simply written as the number of smaller units left over.

**Example:** Change 7 feet to yards

Step 1. Divide 7 feet by the conversion factor 3

\[
7 \div 3 = 2 \text{ r}1
\]

Step 2. Write the remainder as the number of feet left over.

**Answer:** 7 feet = 2 yards 1 foot

5. 47 oz. = ________ lbs. ________ Oz.
Answer Key:  
Test 2 Part 14

1. 48
2. 6
3. 6
4. 5
5. 2lbs. 15 oz
Steps for Rounding Decimal Practices Test 2 Part 15

1. Underline the digit in the place you are rounding to
2. Look at the digit to the right of the underlined digit. If the digit to the right is 5 or more, add 1 to the underlined digit. If the digit to the right is less than 5, leave the underlined number as is.
3. Discard the digits to the right of the underlined digit.

Example: Round 2. 1749 to the thousandths place.

Step 1. Underline the digit in the thousandths place. 
_ Underline the 4: 2.1749_

Step 2. Look at the digit to the right of the 4. The digit is 9. Since 9 is “5 or more,” add 1 to the underlined digit 4. 
Add 1 to 4: 2.1759

Step 3. Discard the digit 9

**Answer: 2.175**

Round each amount below to the nearest cent. For each amount circle one of the two answer choices.

1. $.467: $.46 or $.47
2. $.953: $.95 or $.96
3. $6.875: $6.87 or $6.88

Round each decimal fraction below as indicated. The first problem in each row is done for you.

To the nearest tenth.

4. .52 _________
5. .375 _________

To the nearest hundredth.

6. .483 _________
7. .725 __________
Answer Key: Test 1 Part 15

1. $.47
2. $.95
3. $6.88
4. .5
5. .4
6. .48
7. .73
READING COMPREHENSION FACE SHEET

Directions: Students will

1. Read explanations on how to answer reading comprehension questions and sharpen reading skills.
2. Take the “Sample Reading Test”; fill in information on face sheet.
3. Take the “Reading” test.
4. Correct all problems
5. Fill in information on face sheet, which is in front of both tests.
6. Return work to HESI staff; arrange tutoring or conference to give go-ahead on taking actual HESI test.

Important:

1) Use the space provided on the paper for scratch paper; all work should be done on these pages for ease of assessment.
2) Fill in the blanks on the face sheet to assist the HESI staff in assessing your skills and weaknesses.

Your goal is to achieve 80% minimum on any exercise.

¾ To calculate Total number of correct answers, subtract number of incorrect answers from total number of problems.
¾ To calculate percent correct: multiply number correct X 100, divide this number by total number of problems.

Example: 80 correct out of 100: 80 X 100 = 8000 8000 divided by 100= 80 or 80%

OVERALL READING COMPREHENSION TEST SCORE

Total number of problems: 47
Number correct: _____ Multiply number correct X 100 = _______
Divide by total number of problems = ___________%

Tutor will review for areas to work on in reading comprehension.

Areas to work on: ________. _________. _________. _________.
Reading Comprehension

1. Sample Reading Test

Total Number of questions ___8___
Total Number of correct answers _________ X 100= _________ Divide this number by total number of questions

Percent Correct________

2. Reading

Total Number of questions ___39___
Total Number of correct answers _________ X 100=_________ Divide this number by total number of questions

Percent Correct________

Next step: Go to page 79 to enter overall score for Reading Comprehension; then go to Vocabulary section.
HOW TO ANSWER READING COMPREHENSION QUESTIONS AND SHARPEN YOUR READING SKILLS (WITHOUT REALLY TRYING)

Read this the night before you take your exam. It will help you get the right answers on reading comprehension questions.

¾ When you get to the reading comprehension section, take a deep breath and;
   o Quickly read through the questions—not the answer choices, just the questions. You will be able to focus your reading knowing what the questions are.
   o Read the passage, paying attention to details. Be alert for what the author thinks is important, by noting phrases like Of importance is….., Do not overlook….., and Note that....
   o Read each question carefully to determine what is being asked. Watch for all-inclusive words like always, never, all, only, every, absolutely, completely, none, entirely, no. These words will affect your answer.
   o Read all answer choices. Eliminate obviously incorrect choices. Do not jump to choose the first answer that looks correct. Refer to the passage to get the best answer.
   o Avoid spending too much time on any one question. If you’re stuck on a question, choose from the answers left after eliminating the obviously incorrect ones and move on.

SHARPEN READING SKILLS

There are seven reading skills tested on the HESI exam; the basic tenet emphasized here is: Reading proactively to keep focused. The skills and how to improve them are described below:

1. Identify the main idea – key to understanding what you’re reading and what to remember.
   a. Ask “What is the passage about and what point is the author making about the topic?”
   b. Summarize the paragraph in your head after you read it.
   c. Visualize as you read—picture the information being projected on a big screen TV.
   d. Remember that main ideas can be found in the beginning, middle, or end of a paragraph or passage.
   e. Look at details, examples, causes, reasons to find implied, or unstated, main ideas.
2. **Identify supporting details**---examples, added information which support main idea.
   a. Pick key word from the question and scan the passage for location of the answer.
   b. Identify details by transition words like *one, next, another, first, finally.*

3. **Finding the Meaning of Words in Context**--- look for context clues, which are words or sentences surrounding unknown word (s): the provide information on meaning for the reader.

   Context clues include:

   a. **Definition**: meaning of word put in parentheses, or stated in following sentence.
   b. **Synonym**: more familiar word given, which means same as unknown word.
   c. **Antonym**: word given with opposite meaning of unknown word; watch for words that signal an antonym, like *although, but, instead.*
   d. **Restatement**: unknown word paraphrased, or restated in sentence using more familiar words.
   e. **Examples**: examples illuminate meaning of unknown word.
   f. **Explanation**: additional information explains unknown word.
   g. **Word structure**: knowledge of meanings of prefixes, suffixes, and roots can help reader make educated guess about unknown word.

4. **Identifying a Writer’s Purpose and Tone** --- purpose can be to entertain, inform, persuade. Tone is author’s attitude or feelings towards topic. Choice of words is clue to both.

   Ask these questions: 1. Who is the intended audience? 2. Why did the author write this?

   **Persuade**: means trying to change thinking, encouraging reader to buy something, convince someone to vote a certain way. “Connotation” refers to emotions, feeling reader attaches to words.

   Identify words in the passage for negative or positive connotation to determine why the author wrote the passage, how he/she is trying to manipulate the reader’s feelings. For example, if the passage is about a beautification project, the author might describe it using positive connotation (and tone), in words like *inspired, visionary,* to get the reader to agree. Or, the writer may describe the project using negative connotation (and tone)with words like *wasteful, foolhardy* in opposition.
Inform: passages written to inform are less biased, with fewer words that have positive or negative connotation. Supportive text is factual and allows reader to form own opinion of subject matter.

5. Distinguishing Between Fact and Opinion --- facts can be proven to be right or wrong. Ex. The world is round. Opinions are personal statements which cannot be proven. Ex. “Titanic” was the best movie ever made.

Critical reading means looking at choice of words to determine whether writer is stating fact or opinion.

Facts: concrete words including measurable data, colors. Ex. Joe weighs 215 pounds. Sally’s dress is red.

Opinions: evaluative or judgmental words (good, better, best, worst); abstract words (love, envy, hate); and statements that speculate about future events are considered opinions.

6. Making Logical Inferences --- inferences are not stated in the reading; they are educated, logical guesses made by the reader --- “reading between the lines” --- based on the available facts, information, and reader’s knowledge and experience. Key to making inferences is to be sure the facts and evidence in the reading supports the inferences.

7. Summarizing --- summary is shortened version of passage with some supporting details, that is important information only. Leaves out unnecessary and redundant information.

This type of question takes the longest for students. Three rules to follow:

a. Summary to include main ideas from beginning, middle, and end of passage
b. Summary presented in chronological (as it happened) order.
   c. Summary must have accurate information. False information automatically rules out choice.
According to news reports, more senior citizens are accruing credit card debt that ever before. One reason given for the increase is that many seniors simply did not save enough money for retirement. Another reason given is the high cost of prescription drugs that are not covered by Medicare. Although the possibility of a prescription drug benefit being added to Medicare was a big issue in the last presidential campaign, it does not appear that any legislation will be enacted soon.

Meanwhile, some seniors are spending 50 – 60% of their incomes on prescription drugs. With utilities, mortgage payments, and groceries, it is easy to see why some seniors are forced to use their credit cards. According to SRI Consulting Business Intelligence in Princeton, NJ., a research and consulting firm, the average debt of households headed by someone over 65 rose from $8,000 in 1992 to $23,000 in 2000. That is an increase of 188%.

Another reason given for seniors ending up in so much debt is the fact that they don’t understand how credit cards work and by simply paying off the minimum, most of the payment goes toward interest. Whatever the reason, many seniors today have to abandon formerly held conservative attitudes toward debt and join the millions of Americans who buy on credit.

Congress should enact Medicare legislation that helps make prescriptive drugs more affordable for seniors. It doesn’t seem fair that those who have worked hard all their lives should have to stress over finding enough money to pay their bills in their so called “golden years.” Write your congressional representatives and encourage them to enact the appropriate legislation.

1. What is the main idea of the passage?
   A. The high cost of prescription drugs is a difficult burden for seniors to bear.
   B. Credit Card debt for seniors rose 188% from 1992 to 2000.
   C. Senior citizens today did not save enough money for their retirement years.
   D. There are several reasons why many senior citizens today are in credit card debt.

2. Which of the following is not listed as a detail in the passage.
   A. Seniors did not save enough for retirement.
   B. Many seniors spend money gambling.
   C. The cost of prescription drugs is a drain on the seniors’ income.
   D. Seniors don’t always understand how credit cards works.

3. What is the meaning of the word “accruing” as used in the first paragraph?
   A. Something that increases or accumulates.
   B. Something that attaches itself like a parasite.
   C. Something that annoys.
   D. Something that describes emotion.
4. What is the author’s primary purpose in writing this essay?
   A. To inform
   B. To persuade
   C. To entertain
   D. To analyze

5. Identify the overall tone of the essay.
   A. Encouraging
   B. Optimistic
   C. Pessimistic
   D. Angry

6. Which of the following statements is an opinion?
   A. More seniors are accruing credit card debt than ever before.
   B. The high cost of prescription drugs has added to the credit card debt of seniors.
   C. Congress should enact Medicare legislation to make prescription drugs more affordable.
   D. Some seniors get into debt because they do not understand how credit cards work.

7. Which statement would not be inferred by the reader?
   A. Some seniors are having a difficult time paying their bills.
   B. Seniors should not allow their children to use their credit cards.
   C. Some seniors did not plan well for their retirement.
   D. Some seniors have to use credit cards to pay for their food and other basic necessities.

8. Choose the best summary of the passage.
   A. Prescription costs are keeping seniors in credit card debt. Many seniors were not financially prepared for retirement. Some seniors do not understand how credit cards work. There has been a huge increase in credit card debt for households headed by seniors.
   B. More seniors have credit card debt than ever before. Some seniors don’t understand how credit cards work. The high cost of prescription drugs has caused many to use their credit cards for basic necessities. Something needs to be done to help the seniors enjoy their retirement years.
   C. The average debt for households headed by seniors has decreased in the last decade. Many seniors hold conservative attitudes about debt, but they are being forced to abandon their ideas out of necessity. Congress could help seniors by enacting legislation that would reduce the cost of prescription drugs.
   D. More seniors hold credit card debt that ever before. Reasons for this include the lack of adequate financial planning for retirement, the high cost of prescription drugs, and the misunderstanding of how credit cards work. Congress needs to enact legislation to help today’s seniors with the high cost of prescription drugs.
**Answer Key: Reading Comprehension Practice Test**

1. D (main idea)
2. B (supporting details)
3. A (meaning of word in context)
4. B (author’s purpose)
5. C (author’s tone)
6. C (fact and opinion)
7. B (inferences)
8. D (summary)

**Bibliography**


Enter score on face sheets pages 79—80
Reading Comprehension

Directions: Read each passage carefully. Then mark one answer—the answer you think is best for each item.

Sample:
The next test has short reading passages, each one followed by questions.

A. The reading passages on the next test will be
   a) all on one page
   b) followed by questions
   c) easy to read
   d) very long.

Correct Marking on Separate Answer Sheet

Our planet Earth is divided into seven separate layers. The outer layer is called the “crust” and appears to be approximately twenty miles thick. Next in line are the four layers of the “mantle.” These layers vary in thickness from 250 to 1000 miles. The remaining two layers are divided into the “outer core” and “inner Core.” The thickness of the outer core has been determined to be slightly more than 1200 miles, while that of the inner core is slightly less than 800 miles. Scientists calculate the location and depth of these layers by measuring and studying the speed and direction of earthquake waves. They have also determined that both temperature and pressure are much greater at the core than at the crust.

113. The thickest portion of the earth is the
    a) crust
    b) outer core
    c) mantle
    d) inner core

114. How many separate layers does the earth have?
    a) two
    b) twenty
    c) seven
    d) four

115. Which of the following is correct?

116. You would expect to find the kind of information in this passage in
    a) an encyclopedia.
    b) a science book.
    c) neither of these.
    d) Both of these.

117. In going from the surface to the center of the earth, in which order would you pass through the layers?
    a) crust, outer core, mantle, inner-core
    b) outer core, inner core, crust, mantle
    c) outer core, crust, inner core, mantle
    d) crust, mantle, outer core, inner core

118. The word vary, as underlined and used in this passage, most nearly means
a) Stabilize  
b) Increase  
c) Range  
d) Arbitrate

119. Which of the following is correct?
   a) Scientists know the exact thickness of the crust.  
   b) Scientists believe they know the thickness of the crust.  
   c) The thickness of the crust cannot be determined.  
   d) Scientists cannot agree as to the thickness of the crust.

120. In comparing the core with the crust, you would find that at the core,
   a) temperature and pressure are less  
   b) pressure is greater, temperature is less  
   c) temperature is greater, pressure is less  
   d) temperature and pressure are greater

121. The word *slightly*, as underlined and used in this passage, most nearly means
   a) scarcely  
   b) considerably  
   c) a little  
   d) at least

122. The word *remaining*, as underlined and used in this passage, most nearly means
   a) previous  
   b) outer  
   c) last  
   d) prior

The man is in utter darkness. Only the wavering beam of light from his flashlight pierces the blackness. The air, damp and cold, smells or dank, unseen, decaying material.

The man stumbles over stones, splashes into a hidden puddle. He bangs into a cold rocky wall. The flashlight cocks upward, and suddenly, the air is filled with the flutter of thousands of wings and the piping of tiny animal wails. He ducks, startled, then grins. He’s found what he’s looking for—bats!

For this man is a “spelunker,” another name for someone who explores caves for the fun of it. Spelunkers actually enjoy crawling on their stomachs in narrow, rocky tunnels far below the surface of the earth.

Spelunkers have discovered new caves. Some have formed clubs, sharing safety knowledge, developing new techniques, and teaching novices.

For spelunkers believe that earth’s inner spaces are as exciting as the universe’s outer spaces.

123. The first two paragraphs of this passage describe a cave’s
   a) rocks  
   b) depth  
   c) atmosphere  
   d) streams

124. The word *wavering*, as underlined and used in this passage, most nearly means
   a) swaying  
   b) steady  
   c) strong  
   d) shining

125. The author of this passage is most likely a
   a) spelunker  
   b) cave scientist  
   c) medical doctor  
   d) magazine writer

126. The cave the man was exploring was probably
   a) large and dry  
   b) deep underground  
   c) near the surface  
   d) dangerous

127. According to this passage, what started the bats to suddenly fly about?
   a) the spelunker  
   b) the damp and cold air  
   c) the flashlight  
   d) the sudden noise

GO ON TO THE NEXT PAGE
128. The man ducked when the bats flew because he was
   a) angry.
   b) afraid.
   c) surprised.
   d) hurt.

129. The word utter, as underlined and used in this passage, most nearly means
   a) bovine
   b) unspeakable
   c) oppressive
   d) great

130. According to this passage, spelunkers ignore
   a) safety rules.
   b) light.
   c) discomfort.
   d) other spelunkers.

131. A good title for this passage would be
   a) “Batty About Bats.”
   b) “Spelunkers—Underground Explorers.”
   c) “Inner Space.”
   d) “The life of a Spelunker.”

132. According to this passage, which word would most nearly describe spelunkers?
   a) experimental
   b) cautious
   c) antisocial
   d) adventurous

Litterbugs have a bad reputation, but the biggest litterbugs in history have, in fact, been very helpful to mankind.

For glaciers, in ancient times and today, are the greatest creators and distributors of litter. Of course, they don’t drop tin cans, paper cups, and pop bottles; they dump rocks, boulders, sand, gravel, and mud all over the landscape, and its this glacial debris that has helped create some of the world’s most fertile farmland, such as that in America’s Midwest.

Geologists describe glacial ice as true rock, different only in that it melts more easily than other rock. Because glacial ice is moving rock, it scrapes, bangs, and tears at the terrain over which it moves, breaking off chunks of all sizes. When the ice melts, the debris drops, and, if it is rich in minerals, creates fertile soil when it erodes.

   It’s too bad human litterbugs aren’t as useful!

133. The richness of the oil in America’s Midwest can be attributed, in part, to
   a) heavy annual rainfalls
   b) scientific analysis
   c) human litterbugs
   d) ancient glacial debris

134. Although the author of this passage describes glaciers as litterbugs, his attitude toward glaciers is one of
   a) love
   b) gratitude
   c) admiration
   d) fear

135. Which of the following is correct?
   a) Glacial ice is full of pop bottles.
   b) Glaciers are harmful.
   c) Glaciers erode the terrain.
   d) Glacial ice may be full of fertile soil.

136. According to this passage, history’s biggest litterbugs are
   a) glaciers
   b) people
   c) rocks
   e) bulldozers

137. The words most fertile, as underlined and used in this passage, most nearly mean
   a) most icy
   b) flattest
   c) most rocky
   d) best growing

138. Good soil contains
   a) rocks
   b) minerals
   c) vitamins
   d) melted ice
139. A good title for this passage might be
   A) “A Lovely Litterbug.”
   B) “The Destructive Forces of Glaciers.”
   C) “Glaciers – Then and Now.”
   D) “The History of Glaciers.”

140. This passage implies that the litter humans drop is
   A) Useless.
   B) Ugly.
   C) Uninteresting.
   D) Unimportant.

141. The word terrain, as underlined and used in this passage, most nearly means
   A) Rock.
   B) Terror.
   C) View.
   D) Land.

142. It could be said, on the basis of this passage, that glaciers change the
   A) Earth’s atmosphere.
   B) Pollution rate.
   C) Mineral content of rocks.
   D) Earth’s geography.

The superstition of witchcraft, which most people laugh at today, is still a matter of mystery and speculation.

Hundreds of thousands of people in Europe who were accused of being witches were executed during the Middle Ages and even as late as the early eighteenth century. Their deaths probably resulted from hysterical fears. Yet the judges undoubtedly were sincere in their desire to eliminate what they thought was a real danger. Some modern psychologists have theorized that so-called witches actually were dangerous. In essence, they say that a person who believes in the powers of witchcraft can be affected emotionally or physically he may even die—because of a “witch’s spell.”

When Europeans immigrated to America, they brought their beliefs with them. There were a number of witchcraft trials in Massachusetts during the 1600s; however after the execution of twenty Salem “witches” in 1692, prosecution for witchcraft didn’t survive long in the New World.

Most people in the civilized world no longer believe in witchcraft. Nonetheless, the subject is fascinating for many people. As an example, the TV show “Bewitched” was a very popular program for more than five years.

143. This passage was probably printed in
   A) history book.
   B) A magazine.
   C) A psychology book.
   D) An encyclopedia.

144. According to this passage, the mystery of witchcraft is
   A) a major problem for psychologists.
   B) very little interest today.
   C) still unsolved.
   D) a major problem for sincere judges.

145. One of today’s reminders of ancient witchcraft beliefs is.
   A) Halloween.
   B) April Fools Day
   C) The use of brooms
   D) The death penalty for certain crimes.

146. Which group can we be sure has had members who believed in witchcraft?
   A) judges
   B) TV producers
   C) Psychologists
   D) Newspaper reporters

147. This passage calls witchcraft a “Superstition.”

Which of these would also be a superstition?
   A) “Many hands make light work.”
   B) “Breaking a mirror brings bad luck.”
   C) “Eating sweets causes pimples.”
   D) “Great oaks from little acorns grow.”

148. According to some psychologists, persons who do believe in witchcraft
   A) can be harmed by it.
   B) Tend to laugh at it today.
   C) Are crazy.
   D) Tend to be dangerous.
150. The word *fascinating*, as underlined and used in this passage, most nearly means
   a) frightening.
   b) Enjoyable
   c) Frustrating
   d) Interesting

151. This passage suggests that what you believe.
   a) can hurt you
   b) should be based on facts
   c) does not affect you
   d) changes as you grow older

152. A good title for this passage might be
   a) “Witchcraft—Fact of Fiction?”
   b) “The End of Witchcraft.”
   c) “Witchcraft in the New World.”
   d) “The Powers of Witchcraft.”
Answer Key:
Reading Comprehension

113. B
114. C
115. C
116. D
117. D
118. C
119. B
120. D
121. C
122. C
123. C
124. A
125. D
126. B
127. C
128. C
129. D
130. C
131. B
132. D
133. D
134. B
135. D
136. A
137. D
138. B
139. A
140. A
141. D
142. D
143. B
144. C
145. A
146. A
147. B
148. A
149 OMIT
150. D
151. A
152. A
VOCABULARY FACE SHEET

1. Take the Vocabulary tests, which are divided into “everyday” and “medical terminology.”
2. Correct all questions. Use dictionary to enhance study after correcting test.
3. Fill in information on face sheet, which is in front of all tests.
4. Study lists of medical terminology following quizzes. Use medical dictionary or regular dictionary to enhance knowledge of medical terminology.
5. Return work to HESI staff, arrange tutoring or conference to give go-ahead on taking actual HESI test.

Important: Fill in the blanks on the face sheet to assist the HESI staff in assessing your skills and weaknesses.

Your goal is to achieve 80% minimum on any exercise.

¾ To calculate Total number of correct answers, subtract number of incorrect answers from total number of problems
¾ To calculate Percent correct: multiply number correct X 100, divide this number by total number of problems.

Example: 80 correct out of 100: 80 X 100= 8000 8000 divided by 100= 80 or 80%

OVERALL VOCABULARY TEST SCORE

Total number of problem: 1) Everyday 100
Number correct: ________ Multiply number correct X 100 = ________
Divide by total number of problems= ________%

Total number of problems: 2) Medical Terminology 125
Number correct: ________ Multiply number correct X 100 = ________
Divide by total number of problems= ________%

Tutor will review for areas to work on in vocabulary.

Areas to work on: ________, ________, ________, ________, ________. 
1. **Test 5 (everyday)**

Total number of Questions \( 10 \)
Total number of **correct** answers \( \_ \_\_ \_ \) X 100 = \( \_ \_\_ \_ \) Divide this number by total number of questions
Percent Correct \( \_ \_\_ \_ \)

2. **Exams 7, 10-14 (everyday)**

Total number of Questions \( 90 \)
Total number of **correct** answers \( \_ \_\_ \_ \) X 100 = \( \_ \_\_ \_ \) Divide this number by total number of questions
Percent Correct \( \_ \_\_ \_ \)

3. **Spelling (everyday)**

Total number of Questions \( 50 \)
Total number of **correct** answers \( \_ \_\_ \_ \) X 100 = \( \_ \_\_ \_ \) Divide this number by total number of questions
Percent Correct \( \_ \_\_ \_ \)

4. **Multiple Choice Quiz (medical terminology)**

5. **Chapter One**

Total number of Questions \( 25 \)
Total number of **correct** answers \( \_ \_\_ \_ \) X 100 = \( \_ \_\_ \_ \) Divide this number by total number of questions
Percent Correct \( \_ \_\_ \_ \)

6. **Chapter Two**

Total number of Questions \( 25 \)
Total number of **correct** answers \( \_ \_\_ \_ \) X 100 = \( \_ \_\_ \_ \) Divide this number by total number of questions
Percent Correct \( \_ \_\_ \_ \)

7. **Chapter Three**

Total number of Questions \( 25 \)
Total number of **correct** answers \( \_ \_\_ \_ \) X 100 = \( \_ \_\_ \_ \) Divide this number by total number of questions
Percent Correct \( \_ \_\_ \_ \)

8. **Chapter Four**

Total number of Questions \( 25 \)
Total number of **correct** answers \( \_ \_\_ \_ \) X 100 = \( \_ \_\_ \_ \) Divide this number by total number of questions
Percent Correct \( \_ \_\_ \_ \)
9. Chapter twenty-One:

Total Number of questions ___25____
Total Number of Correct answers___ x 100= _____ Divide this number by total number of questions
Percent Correct___________

Next step: Go to page 93 to enter overall scores for vocabulary section; then go to grammar section.
Test 5

For numbers 21 through 30 select the word that best fits into the blank.

21. The managers were _________ by the public response to the company’s successful sales campaign.
   A. petrified  
   B. recognized  
   C. gratified  
   D. amused

22. The efforts of the rescue team were _________ by the lack of equipment.
   A. accelerated  
   B. hampered  
   C. resolved  
   D. facilitated

23. Early settlers were _________ by wandering bands of cruel outlaws.
   A. harassed  
   B. protected  
   C. supervised  
   D. comforted

24. The dense hedge of thorns and barbed wire formed a(n) _________ barrier around the ranch house.
   A. attractive  
   B. impenetrable  
   C. colorful  
   D. fragile

25. Only a _________ could be sent to the office for a pair of paper stretchers.
   A. technician  
   B. researcher  
   C. consumer  
   D. novice

26. During the fire drill, the well-trained students left the building in a(n) _______ fashion.
   A. orderly  
   B. rowdyish  
   C. amateurish  
   D. cordial

27. In the long run, the will of the majority must _________ in a democracy.
   A. vanish  
   B. falter  
   C. prevail  
   D. recede

28. The _________ spring weather brought thousands of vacationers to the national parks.
   A. cold  
   B. variable  
   C. humid  
   D. balmy

29. The children tried to _________ their loving grandparents into taking them to the fairgrounds.
   A. enforce  
   B. cajole  
   C. coerce  
   D. overpower

30. Our form of government is a monument that will _________ the memory of our founding generation.
   A. perpetuate  
   B. erase  
   C. consolidate  
   D. alter
Answer Key:  
Reading Vocabulary  
Test 5

1—10  There is only one synonym of each given word.

11—20  There is only one antonym for each given word.

21. (H) A successful sales campaign leads to gratified managers.

22. (B) Lack of equipment justifies hampered.

23. (F) Bands of cruel outlaws points toward harassed settlers.

24. (B) Dense hedge of thorns and barbed wire would be impenetrable.

25. (J) A pair of paper stretchers would fool only a novice.

26. (A) Well-trained students would leave in an orderly fashion.

27. (H) The key phrase is in a democracy, where the will of the majority must ultimately prevail.

28. (D) Thousands of vacationers will be lured out doors by balmy weather.

29. (G) The Children would try to persuade their grandparents by being nice, or making promises; they would cajole them.

30. (A) Our democratic republic will perpetuate the memory of our founding fathers.

Enter score on face sheets pages 93-95
DIRECTIONS: In each of the phrases below, study the underlined word and decide which of the words or phrases given as choices has most nearly the SAME meaning. Blacken the box with the same letter as the meaning of the underlined word.

EXAMPLE:
A cheerful face
a. sad  b. bashful  c. rough  d. happy

Box d has been blackened because a cheerful face is a happy face, rather than a sad, bashful, or rough face. The letter before “happy” is “d”; therefore, box d is blackened.

1. A massive structure
a. trifling  b. tremendous  c. isolated  d. lovely

2. drawing night
a. away  b. near  c. up  d. water

3. a startling observation
a. remark  b. view  c. service  d. claim

4. punctual arrival
a. late  b. early  c. on time  d. pointed

5. quelled the uprising
a. located  b. incited  c. approved  d. put down

6. radiated light
a. sent forth  b. obscured  c. rained  d. heated

7. replenish the supply
a. use up  b. drain off  c. lose  d. replace

8. of the finest quality
a. number  b. price  c. grade  d. worthlessness

9. pierce the skin
a. penetrated  b. hand from  c. burn  d. stretch

10. a fine opportunity
a. decision  b. education  c. truth  d. chance

11. a notable success
a. outstanding  b. notice  c. taking notes  d. musical

12. for medicinal purposes
a. final  b. digestive  c. solving  d. curative

13. a minute detail
a. hourly  b. very small  c. timed  d. quick

14. necessary requirements
a. essential  b. plausible  c. partial  d. fulfilling

15. an obedient pupil
a. rebellious  b. happy  c. dutiful  d. bright

16. a rugged pioneer
a. colonist  b. conservative  c. radical  d. flower

17. a quaint restaurant
a. dirty  b. unpleasant  c. a la carte  d. old-fashioned

18. the reformed convict
a. reasonable  b. change for the better  c. evil  d. guilty

19. a respected doctor
a. highly regarded  b. experienced  c. famous  d. engaged in research

20. quickened our interest
a. explained  b. modified  c. deadened  d. aroused
Reading Comprehension: Exam 10

Directions: In the exercise below, complete each sentence by selecting the one right answer from the five choices that follow, and then blackening the box containing the letter of the right answer, as in the example below.

EXAMPLE:
A narrative is a
a. composition  b. musicale  c. story  d. mystery  e. vehicle

1. A manual control would be operated
a. automatically  b. rapidly  c. quietly  d. by hand  e. electrically

2. An objective report by a committee would be
a. prejudiced  b. subjective  c. personal  d. offensive  e. fair

3. A colorful pageant is
a. a public entertainment  b. a party  c. a disorderly gathering  d. client  e. platter

4. To preserve our liberties means to __________ our liberties.
a. harm  b. safeguard  c. change  d. enjoy  e. desecrate

5. A man prowess is
a. proud  b. excessively humble  c. extraordinary able  d. cowardly  e. none of these

6. His pugilistic skill means __________ skill.
a. athletic  b. musical  c. lack of  d. boxing  e. none of these

7. A medical quack is a(n)
a. fraud  b. expert  c. hypnotist  d. boxing  e. none of these

8. A corrupt regime is
a. unheard of  b. expert  c. hypnotist  d. specialist

9. To resist tyranny is to __________ tyranny.
a. fight against  b. submit to  c. suffer  d. worship  e. none of these

10. A robust woodsman is
a. anemic  b. sturdy  c. pallid  d. frail  e. none of these
**EXAM 11**

DIRECTIONS: Each sentence below contains an underlined word. If the underlined word is used correctly in the sentence, circle the T to the right of the question. If the underlined word is used incorrectly, circle the F to the right of the question.

**EXAMPLE:**
An uninhabited country is one which has a huge population.

1. A *rapier* is a short, broad sword.
2. *Rebellion* is a peaceful change of government.
3. I can *recollect* events that happened when I was five years old.
4. As security guard, you need a person of *reliability*.
5. A repentant drunkard feels no *remorse* for his wasted life.
6. Snakes and lizards are *reptiles*.
7. *X* represents an unknown quantity in algebra.
8. A scoundrel *resorts* to trickery.
9. *Restraint* is required when criticizing our benefactors.
10. *Plaid* is a colorless strip of material used as trimming.
11. By using a *ruse*, he was able to gain his ends openly and fairly.
12. The light snow *scorched* her face gently.
13. *Sculpture* is one of the fine arts, the art of building beautiful structures.
14. The knife was placed in a *sheath* to keep it away from the children.
15. After a day in the desert, our food was *sodden*.
17. Spontaneous applause came all night from the paid applauders.
18. The cattle remained clam during the *stampede*.
19. There is no more *steadfast* friend than a fickle girl.
20. His *suave* manners were uncouth.

**EXAM 12**

DIRECTIONS: For the underlined word in each phrase at the left, select the lettered word or phrase that means most nearly the SAME. Print the letter of the correct answer in the space at the right.

**EXAMPLE:**
An overcast sky a. brilliant b. cloudy c. windy d. clear e. starry

1. A noble *sacrifice* a. impulse b. act of truth c. gaiety d. response e. act of unselfishness.
2. With great *tact* a. ability to say and so the right thing b. inconvenience c. exertion d. facility at touching e. piece of information.
3. His *urgent* message a. gloomy b. rebellious c. denial d. delaying e. important
4. The bright *sash* a. bloody wound b. ribbon c. dance step d. battle
5. The *talented* singer a. beautiful b. boastful c. skillful d. scout e. poor
6. Her *untimely* remark a. disgusting b. late c. unorthodox d. ill-timed e. embarrassing
7. A *vague* answer a. complete b. stylish c. stupid d. unclear e. scarlet
8. The vacant lot a. parking b. stupid c. empty d. whole e. cultivated
9. The *unabridged* dictionary a. incomplete b. book of bridges c. Webster’s d. unaberrated e. unshortened
10. A typical teenager a. rock ‘n’ roll b. mature c. happy d. delinquent e. average
11. The *significant* event a. unhappy b. wedding c. following d. important e. last
12. A noble *sentiment* a. feeling b. sadness c. cry d. lament e. silliness
13. The *turmoil* in the hills a. quiet b. quiet c. girl d. elephant e. crowd
14. *Unsound* reasoning a. ringing b. untested c. intelligent d. precocious e. faulty
15. The moving *van* a. truck b. furniture c. house d. man e. wheels
16. A *vision* of success a. story b. break c. dream d. fulfillment e. example
17. With *uncommon* fervor a. ordinary b. dreamy c. noisy d. unrealistic e. more than usual
18. the important transaction
a. business man  b. result  c. method of communication
d. piece of business  e. proceeding

19. the third stanza
a. Song  b. repetition  c. lyric
d. portion of a poem  e. scale

20. the subsequent events
a. in place of  b. following
c. preceding  d. important
e. significant

EXAM 13

DIRECTIONS: For the underlined word in each phrase at the left, select the lettered word or phrase that means most nearly the SAME. Print the letter of the correct answer in the space at the right.

EXAMPLE:
An ambitious man
a. lazy  b. energetic  c. purposeful
d. cruel  e. fine

1. The traditional costume: a. young  
   b. peasant  c. tattered  d. dance  
   e. handed down through the ages

2. utilize your talents! a. make use of  
   b. utilities  c. sing  d. modernize  
   e. undo

3. his vigorous objection: a. unhappy  
   b. poorly timed  c. vintage  d. wrong  
   e. tasteful

4. the vulgar remark a. coarse  
   b. poorly timed  c. vintage  d. wrong  
   e. tasteful

5. her sullen mood a. happy  
   b. silly  c. brooding  d. sunny  
   e. distasteful

6. the spacious garden a. empty  
   b. outdoor  c. roomy  d. lovely  
   e. springy

7. terminate the business a. start  
   b. remodel  c. refinance  d. exterminate  
   e. put an end to

8. the upright position a. erect  
   b. upset down  c. immovable  d. wrong  
   e. sloppy

9. veto the bill a. sign  
   b. withdraw  c. debate on  
   d. pass  e. refuse to sign

10. variety of acts a. show  
    b. hall  c. sequence  
    d. poor quality

EXAM 14

DIRECTIONS: In each line below you will find one italicized word followed by five words or phrases lettered a to e. In each case choose the word or phrase that is closest in meaning to the italicized word. Then blacken with your pencil the space with the letter of the word or phrase you have selected.

EXAMPLE:
Oblique a. blinking  b. scarce  c. level  
   d. criss-cross  e. diagonal

1. stamp a. glide  b. walk heavily  c. imprint  
   d. strut  e. blast loose

2. swell a. sink  b. come after  c. drive a horse carriage  
   d. go off alone  e. commute

3. surge a. swell  b. take a view of  c. influence  
   d. remove  e. excel

4. taunt a. placate  b. mimic  c. tangle  d. mock  
   e. tighten

5. tempo a. storm  b. largo  c. rhythm  d. tendency  
   e. symphony

6. thrive a. dishevel  b. push  c. bounce  d. confess  
   e. flourish

7. triangular a. mathematical  b. perpendicular  
   c. having four angles  d. three-sided  
   e. trapezoidal

8. tumult a. wretchedness  b. noise and confusion  
   c. exciting anticipation  d. multiplication  
   e. deep and violent anger

9. tyrant a. despot  b. ruler  c. sovereign  
   d. viceroy  e. premier

10. unique a. 100%  b. not basic  c. alone of its kind  
    d. changeable  e. extraordinarily large
### Answer Key: VOCABULARY

#### EXAM 7
| 1. b | 5. d | 9. a | 13. b | 17. d |
| 2. b | 6. a | 10. d | 14. a | 18. b |
| 3. a | 7. d | 11. a | 15. c | 19. a |
| 4. c | 8. c | 12. d | 16. a | 20. d |

#### EXAM 8

#### EXAM 9

#### EXAM 10
| 1. d | 3. a | 5. c | 7. a | 9. a |
| 2. e | 4. b | 6. d | 8. e | 10. b |

#### EXAM 11

#### EXAM 12
| 1. e | 5. c | 9. e | 13. b | 17. e |
| 2. a | 6. d | 10. e | 14. e | 18. d |
| 3. e | 7. d | 11. d | 15. a | 19. d |
| 4. b | 8. c | 12. a | 16. c | 20. b |

#### EXAM 13
| 1. e | 3. a | 5. c | 7. e | 9. e |
| 2. a | 4. d | 6. c | 8. a | 10. d |

#### EXAM 14
| 1. b | 3. a | 5. c | 7. d | 9. a |
| 2. d | 4. d | 6. e | 8. b | 10. c |

#### EXAM 15
| 1. b | 3. b | 5. d | 7. d | 9. c |
| 2. c | 4. e | 6. a | 8. e | 10. b |

#### EXAM 16
| 1. c | 5. d | 9. d | 13. d | 17. c |
| 2. d | 6. a | 10. b | 14. b | 18. a |
| 3. d | 7. a | 11. d | 15. c | 19. b |
| 4. b | 8. c | 12. a | 16. d | 20. c |

#### EXAM 17
| 1. e | 5. c | 9. b | 13. b | 17. b |
| 3. d | 7. a | 11. b | 15. a | 19. c |
| 4. b | 8. a | 12. e | 16. d | 20. e |

#### EXAM 18
| 1. d | 9. b | 17. b | 25. c | 33. c |
| 2. d | 10. b | 18. a | 26. d | 34. d |
| 3. a | 11. c | 19. d | 27. d | 35. a |
| 4. a | 12. d | 20. c | 28. d | 36. a |
| 5. b | 13. b | 21. d | 29. d | 37. d |
| 6. c | 14. d | 22. d | 30. c | 38. a |
| 7. d | 15. a | 23. d | 31. b | 39. c |
| 8. d | 16. d | 24. d | 32. b | 40. a |

#### EXAM 19
| 1. b | 9. c | 17. c | 25. b | 33. d |
| 2. c | 10. b | 18. b | 26. a | 34. c |
| 3. b | 11. a | 19. b | 27. a | 35. d |
| 4. d | 12. c | 20. d | 28. b | 36. b |
| 5. a | 13. b | 21. c | 29. a | 37. a |
| 6. c | 14. a | 22. a | 30. b | 38. c |
| 7. b | 15. a | 23. c | 31. a | 39. d |
| 8. d | 16. b | 24. a | 32. b | 40. b |

#### EXAM 20
| 1. d | 7. b | 13. c | 19. b | 25. d |
| 2. d | 8. a | 14. d | 20. d | 26. a |
| 3. b | 9. a | 15. b | 21. a | 27. b |
| 4. d | 10. c | 16. d | 22. b | 28. c |
| 5. c | 11. d | 17. a | 23. c | 29. c |
| 6. b | 12. d | 18. c | 24. c | 30. b |
Spelling

Exercise 4

Circle the correct choice

1. He (deserted/ desserted) his unit and (than/ then) fled to Chicago.
2. (Were/ We’re/ Where) can I find a (quite/ quiet) place to study?
3. Of the (to/ too/ two) proposals, the (later/ latter) seems preferable.
4. We found the (consul/ council/ counsel) to be a man of (principal/ principle).
5. (A lot of/ Allot of/ Many) people take up jogging to try to (loose/ lose) weight.
6. (Your/ You’re) supposed to swallow four teaspoons as (your/ you’re) daily (does/ dose).
7. I thought I had mastered the “I before e” (principal/ principle), but (than/ then) they told me about the exceptions.
8. (Its/ It’s) (later/ latter) than you think.
9. The thieves came back (later/ latter) and took everything (accept/ except) the radio.
10. It’s no longer (quiet/ quite) so unusual for a (woman/ women) to be elected to public office.

Exercise 5

Circle the correct choice

1. They plan to (a lot allot) $1500 for the redecoration of their (dining/ dinning) room.
2. Let there be (peace/piec) in (are/ our) time.
3. Each year, an increasing number of (woman/ women) (desert/ dessert) their families.
4. (Were/ We’re/ Where) do you think (were/ we’re/ where) going to get the money?
5. I found it impossible to remain (stationary/stationery), so I walked rapidly back and (forth/ fourth).
6. I (hear/ here) (your/ you’re) sorry you (choose/ chose) this (coarse/course).
7. Do you think children (are/our) (conscience/ conscious) of (there/ their/ they’re) parents’ sacrifices for them?
8. The learning process is greatly (affected/ effected) by student (moral/ morale).
9. He is a person (whose/ who’s) (advice/ advise) I value.
10. Inflation and unemployment are the (principal/ principle) concerns of Americans; world (peace/piece) is considered almost a (miner/ minor) problem in comparison.
Exercise 6

**Circle the correct choice**

1. Prolonged unemployment (affects/ effects) one’s (moral/ morale).
2. A (complement/ compliment) is sometime more welcome (than/ then) a kiss.
3. Following your (advise/advice), I applied to the bank for a (personal/ personnel) loan.
4. As a coal (miner/ minor), he (does/dose) run an increased risk of developing lung disease.
5. I suggest that (there/ their/ they’re) behavior can hardly be described as (moral/ morale).
6. If I (hear/ here) one more complaint, (your/ you’re) going to stay at home.
7. (Whose/ Who’s) been using my (personal/ personnel) (stationary/ stationery)?
8. If I had to (chose/ choose) between the two, I’d follow the (later/ latter) (coarse/course) of action.
9. Two helpings of (desert/ dessert) should be (quiet/ quite) sufficient.
10. (To/ Too/ Two) many people don’t look (were/ we’re/ where) they’re going.

Exercise 7

**Circle the correct choice**

1. I would like to have (desert/ dessert) as the first (coarse/course).
2. (Your You’re) going to have to follow the dictates of your own (conscious/ conscience).
3. Surely (its/ it’s) a question of (principal/ principle).
4. The student asked the guidance counselor to (advice/ advise) her on a (personal/ personnel) matter.
5. The young musician gratefully (accepter/ excepted) our (complements/ compliments).
6. Some (miners. Minors) have little difficulty in convincing a bartender that (their/ there/ they’re) of age.
7. She (choose/ chose) to work in the (dining/ dinning) room of the Holiday Inn.
8. Judging by the pinging sounds I (hear/ here), I’d say (your/ you’re) car needs a tune-up.
9. I’d rather write an essay (than/ then) do an oral report in front of (are/ our) whole class.
10. The salt was (to/ too/ two) (coarse/ course) (to/too/ two) pass through the holes of the shaker.
Exercise 10  

Circle the correct choice

1. I made the turn and (than/ then) saw the sign: “No left turn; buses (accepted/ excepted.)”
2. If you let the dog run(loose/ lose), you must (accept/ except) the consequences.
3. (Whose/ Who’s) turn is it to find the (complement/ compliment) of the angle?
4. We were (to/ too/ two) late for dinner but in time for (desert/ dessert).
5. I accept your (advice/ advise) for the sound (council/consul/ counsel) it is.
6. (Their/ There/ They’re) are many children who believe the tooth fairy will come if they (loose/lose) a tooth.
7. A (stationary/ stationery) store is (were/ we’re/ where) you’ll find carbon paper.
8. The (miner/ minor) skirmish before the game had the (affect/ effect) of making us determined to win.
9. Edmund Burke believed manners were more important ( than/ then) (morales/ morals).
10. State colleges are governed by a (consul/ council/ counsel) (who’s/ whose) function is to (advice/ advise) the Board of Education.
Answer Key:
Spelling

Exercise 4
1. Deserted, then
2. Where, quiet
3. two, latter
4. consul, principle
5. many, lose
6. You’re, your, dose
7. Principle, then
8. It’s, later
9. later, except
10. quiet, woman

Exercise 5
1. allot, dining
2. peace, our
3. women, desert
4. Where, we’re
5. stationary, forth
6. here, you’re, chose, course
7. are, conscious, their
8. affected. Morale
9. whose, advice
10. principal, peace, minor

Exercise 6
1. affects, morale
2. compliment, than
3. advice, personal
4. miner, does
5. their, moral
6. hear, you’re
7. who’s, personal, stationery
8. choose, latter, course
9. dessert, quite
10. Too, where

Exercise 7
1. dessert, course
2. You’re, conscience
3. it’s, principle
4. advise, personal
5. accepted, compliments
6. minors, they’re
7. chose, dining
8. Hear, your
9. than, our
10. too, coarse, to

Enter score on face sheet page 93-95
Answer Key: Spelling

Exercise 9

1. quite, you’re
2. choose, whose
3. Here, is
4. Many, personnel, morale
5. too, we’re
6. then, your
7. coarse, desert
8. conscious, effect
9. its, does
10. conscious, effects

Exercise 10

1. then excepted
2. loose, accept
3. Whose, complement
4. too, dessert
5. advice, counsel
6. there, lose
7. stationery, where
8. minor, effect
9. than, morals
10. council, whose, advise

Enter score on face sheet pages 93-95
MULTIPLE CHOICE QUIZ

In the box write the letter of the choice that is the definition of the term or best answers the question. There is only one correct answer for each question.

1. Gastrectomy: ...........................................  O
   A) Gastric resection
   B) Intestinal incision
   C) Tumor of the stomach
   D) Incision of the stomach
   E) Resection of the intestine

2. Osteitis: ..............................................  O
   A) Incision of a bone
   B) Removal of bone
   C) Incision of a joint
   D) Inflammation of a joint
   E) Inflammation of a bone

3. Cystoscopy: ..........................................  O
   A) Study of cells
   B) Visual examination of cells
   C) Removal of a sac of fluid
   D) Removal of the urinary bladder
   E) Visual examination of the urinary bladder

4. Hepatoma: ..........................................  O
   A) Incision of the kidney
   B) Tumor of the liver
   C) Blood mass
   D) Inflammation of the liver
   E) Red blood cells

5. Which of the following is not an endocrine gland? ...........................................  O
   A) Thyroid gland
   B) Adrenal gland
   C) Ovary
   D) Mammary gland
   E) Pituitary gland

6. Iatrogenic: ............................................  O
   A) Pertaining to produced by treatment
   B) Produced by the mind
   C) Cancer producing
   D) Pertaining to producing a tumor

7. Electroencephalogram: ...........................................  O
   A) Record of electricity in the brain
   B) Record of electricity in the heart
   C) X-ray of the brain
   D) Record of sound waves in the brain
   E) X-ray of the heart and brain

8. Diagnosis: ............................................  O
   A) Is made after prognosis
   B) Is a guess as to the patient’s condition
   C) Is a prediction of the course of treatment
   D) Is made on the basis of complete knowledge about the patient’s condition
   E) Is a treatment of the patient

9. Cancerous tumor: ....................................  O
   A) Hematoma
   B) Adenoma
   C) Carcinoma
   D) Carcinogenic
   E) Neurotomy

10. Microscopic examination of living tissue: ...........................................  O
    A) Incision
    B) Pathology
    C) Biopsy D) Autopsy E) Resection

11. pertaining to the brain: ...........................................  O
    A) Cerebral
    B) Cephalic
    C) Renal
    D) Cardiac
    E) Neural

12. Removal of gland: .......................................  O
    A) Gastrotomy
13. Decrease in numbers of red blood cells: ........................................  O

A) Anemia  B) Erythrocytosis  C) Thrombocytosis  D) Leukemia  E) Leukocytosis

14. Pathologist: ..........................................................  O

A) One who examines x-rays  B) One who operates on the urinary tract  C) One who performs autopsies and reads biopsies  D) One who operates on the kidney  E) One who treats diseases with chemicals

15. Pain in a joint: ......................................................  O

A) Ostealgia  B) Arthritis  C) Osteoarthritis  D) Arthroalgia  E) Arthralgia

16. Increase in numbers of malignant white blood cells: ........................................  O

A) Leukocytosis  B) Leukemia  C) Erythremia  D) Thrombocytosis  E) Erythrocytosis

17. Instrument to view the eye: .........................................  O

A) Ophthalmoscopy  B) Ophthalmoscope  C) Ophthalmology  D) Ophthalmoscope  E) Ophthalmoscopy

18. A platelet .............................................................  O

A) Hematoma  B) Thrombosis  C) Leukocyte

19. Abnormal condition of the mind: .......................  O

A) Phychosis  B) Psychosis  C) Psychogenic  D) Encephalopathy  E) Adenoma

20. Inflammation of the nose: ....................................  O

A) Arthrosis  B) Hepatitis  C) Nephritis  D) Dermatosis  E) Rhinitis

21. Study of cells: .......................................................  O

A) Pathology  B) Cytology  C) Cystology  D) Dermatology  E) Urology

22. Pertaining to through the liver: .........................  O

A) Subrenal  B) Transdermal  C) Transhepatic  D) Subhepatic  E) Hepatoma

23. Abnormal condition of the kidney: ......................  O

A) Neurological  B) Neuralgia  C) Nephritis  D) Nephrotomy  E) Nephrosis

24. Incision of a bone: ..................................................  O

A) Sarcoma  B) Pathogenic  C) Osteotomy  D) Ostectomy  E) Endoscopy
25. High levels of sugar in the blood: ...................

A) Hematoma
B) Hypodermic
C) Hypoglycemia
D) Hyperglycemia
E) Hypogastric
Answer Key:
Chapter One

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<th>Multiple Choice Quiz</th>
</tr>
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<tbody>
<tr>
<td>1) A</td>
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<tr>
<td>24) C</td>
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<tr>
<td>25) D</td>
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</tbody>
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Enter score on face sheet pages 93-95
Chapter Two
MULTIPLE CHOICE QUIZ

In the box write the letter of the choice that is the definition of the term or best answers the question. There is only one correct answer for each question.

1. The process by which food is burned to release energy: ____________________________
   A) Nuclear energy
   B) Anabolism
   C) Phagocytosis
   D) Catabolism
   E) Protein synthesis

2. Part of the cell where formation of proteins occurs: _______________________________
   A) Genes
   B) Chromosomes
   C) Endoplasmic reticulum
   D) Cartilage
   E) Cell membrane

3. Sum of the chemical processes in a cell: ________________________________
   A) Anabolism
   B) Metabolism
   C) Protein synthesis
   D) Catabolism
   E) A and E

4. Picture of nuclear structures arranged in numerical order: _______________________
   A) Biopsy
   B) X-ray
   C) Electroencephalogram
   D) Sonogram
   E) Karyotype

5. Part of a cell where catabolism primarily occurs: ______________________________
   A) Cell membrane
   B) Nucleus
   C) Mitochondria
   D) Genes
   E) Endoplasmic reticulum

6. Allows materials to pass into and out of the cell: ______________________________

7. Genes are composed of: ________________________________
   A) Chromosomes
   B) Ribosomes
   C) Hemoglobin
   D) Deoxyribonucleic acid (DNA)
   E) Mitochondria

8. Muscular wall separating the abdominal and thoracic cavities: ____________________
   A) Mediastinum
   B) Diaphragm
   C) Pleura
   D) Pericardium
   E) Peritoneum

9. The space in the chest between the lungs is called the: ________________________
   A) Peritoneum
   B) Esophagus
   C) Pleural cavity
   D) Mediastinum
   E) Retroperitoneal space

10. Adipose means pertaining to: __________________________
    A) Cartilage
    B) Bone
    C) Fat
    D) Skin
    E) Nervous tissue

11. Throat: ________________________________
    A) Trachea
    B) Coccyx
    C) Larynx
    D) Esophagus
    E) Pharynx

12. Sarcoma: ________________________________
    A) Part of the backbone
13. Craniotomy:  
A) Incision of the skull  
B) Pertaining to the skull  
C) Pertaining to the brain  
D) Incision of the chest  
E) Pertaining to the head

14. A histologist studies:  
A) Drugs  
B) X-rays  
C) Tissues  
D) The backbone  
E) The spinal cord

15. An epithelial cell is a(an):  
A) Skin cell  
B) Nerve cell  
C) Fat cell  
D) Organ  
E) Muscle cell

16. The pleural cavity is the:  
A) Space within the abdomen  
B) Space within the backbone  
C) Space surrounding the hip  
D) Space between the membranes around the lungs  
E) Space within the skull

17. Viscera:  
A) Cells in the blood  
B) Internal organs  
C) Parts of cells  
D) Cavities of the body  
E) Tissues composed of cartilage

18. The pituitary gland is in which body cavity?  
A) Cranial

19. Structure in the trachea:  
A) Bronchial tube  
B) Pharynx  
C) Esophagus  
D) Larynx  
E) Tongue

20. The tailbone is the:  
A) Sacrum  
B) Cervix  
C) Ilium  
D) Coccyx  
E) Cranium

21. Supine means:  
A) Lying on the back  
B) Conducting toward a structure  
C) In front of the body  
D) Lying on the belly  
E) Pertaining to the side

22. The upper lateral regions of the abdomen, beneath the ribs, are the:  
A) Hypogastric region  
B) Inguinal regions  
C) Lumbar regions  
D) Umbilical regions  
E) Hypochondriac regions

23. The RUQ contains the:  
A) Liver  
B) Appendix  
C) Lung  
D) Spleen  
E) Heart

24. Pertaining to a plane that divides the body into right and left portions:  
A) Coronal  
B) Transverse  
C) Frontal  
D) Sagittal
25. A disc is: .................................................................
   A) Part of the hip bone
   B) A piece of cartilage between backbones
   C) A piece of bony tissue connecting the joints in the back
   D) An abnormal structure in the back
   E) A pad of fatty tissue between backbones
Answer Key:  
Chapter Two

Multiple Choice Quiz

1) D  
2) C  
3) B  
4) E  
5) C  
6) B  
7) D  
8) B  
9) D  
10) C  
11) E  
12) C  
13) A  
14) C  
15) A  
16) D  
17) B  
18) A  
19) D  
20) D  
21) A  
22) E  
23) A  
24) D  
25) B  

Enter score on face sheet pages 93-95
MULTIPLE CHOICE QUIZ

Name: ________________________________

In the box write the letter of the choice that is the definition of the term of best answers the question. There is only one correct answer for each question.

1. Amniocentesis: ________________________________
   A) Incision of the abdomen
   B) Paracentesis
   C) Surgical puncture to remove fluid from the abdomen
   D) Puncture of the chest region
   E) Surgical puncture to remove fluid from the sac around the embryo

2. Inflammation of lymph tissue in the throat: ____________
   A) Bronchitis
   B) Laryngitis
   C) Pharyngeal
   D) Tonsillitis
   E) Tonsillitis

3. Prolapse: ________________________________
   A) --pathy
   B) --ptosis
   C) --tropho
   D) --plasty
   E) --plasm

4. Blood is held back from an area: ________________________________
   A) Thrombocyte
   B) Anemia C) Ischemia D) Hematoma E) Hemolysis

5. Death: ________________________________
   A) Neur/o
   B) Neph/o
   C) Neutr/o
   D) Nucle/o
   E) Nect/o

6. Acromegaly: ________________________________
   A) Exocrine disorder of bone enlargement
   B) Enlargement of extremities after puberty due to pituitary gland problem
   C) Abnormal growth of bones before puberty
   D) Endocrine gland problem in young children
   E) Fear of extremities (heights)

7. Pain in the ear: ________________________________
   A) Pleurodynia
   B) Otitis
   C) Otalgia
   D) Osteitis
   E) Neuralgia

8. Continuing over a long period of time: ________________________________
   A) Chronic
   B) Acute
   C) Chronic
   D) Relapse
   E) Remission

9. Small artery is a (an): ________________________________
   A) Capillary
   B) Arteriole
   C) Venule
   D) Lymph vessel
   E) Blood vessel leading from the heart

10. Instrument to visually examine: ________________________________
    A) --scope
    B) --scopy
    C) --opsy
    D) --stasis
    E) --tomy

11. Hernia of the urinary bladder: ________________________________
    A) Rectocele
    B) Inguinal hernia
    C) Hiatal hernia
    D) Rectalgia
    E) Cystocele

12. Tumor of bone marrow: ________________________________
    A) Myosarcoma
    B) Malignant myeloma
    C) Osteogenic sarcoma
    D) Adenocarcinoma
    E) Metastasis
13. X-ray record of the spinal cord:                          O
   A) Electroencephalogram
   B) Bone scan
   C) Myogram
   D) Myelogram
   E) Electromyogram

14. Berry-shaped bacteria:                                    O
   A) Staphylococcus
   B) Pneumococcus
   C) Streptococcus
   D) -cocci

15. Neutrophil:                                               O
   A) Lymphocyte
   B) Polymorphonuclear leukocyte
   C) Monocyte
   D) Agranulocyte
   E) Platelet

16. Instrument to record:                                    O
   A) -gram
   B) -scopy
   C) -scope
   D) -graph
   E) -graphy

17. Resembling:                                              O
   A) -osis
   B) -eal
   C) lith/o
   D) -oid
   E) -ic

18. An eosinophil is a (an):                                  O
   A) Erythrocyte
   B) Leukocyte
   C) Agranulocyte
   D) Platelet
   E) Lymphocyte

19. Removal of the voice box:                                  O
   A) Laryngectomy
   B) Pharyngotomy
   C) Pharyngostomy
   D) Laryngectomy
   E) Tracheotomy

20. Angioplasty means:                                         O
   A) Pertaining to fat
   B) Fear of extremities
   C) Therapy with chemicals
   D) Surgical Puncture of a blood vessel
   E) Surgical repair of blood vessel

21. A blood cell that produces antibodies:                    O
   A) Erythrocyte
   B) Platelet
   C) Lymphocyte
   D) Monocyte
   E) Basophil

22. Opposite of -malacia is:                                   O
   A) -megaly
   B) -sclerosis
   C) -emia
   D) -plasia
   E) -lysis

23. Excessive development:                                    O
   A) Hypoplasia
   B) Dystrophy
   C) Achondroplasia
   D) Morphology
   E) Hypertrophy

24. Treatment:                                                O
   A) -therapy
   B) -tomy
   C) -ectomy
   D) -osis
   E) -stasis

25. Of the body:                                              O
   A) -stomy
   B) -tomy
   C) -ectomy
D) Section
E) Resection
Answer Key:  
Chapter Two

Multiple Choice Quiz

1) E  
2) E  
3) B  
4) C  
5) E  
6) B  
7) C  
8) A  
9) B  
10) A  
11) E  
12) B  
13) D  
14) E  
15) B  
16) D  
17) D  
18) B  
19) D  
20) E  
21) C  
22) B  
23) E  
24) A  
25) A

Enter score on face sheet pages 93-95
MULTIPLE CHOICE QUIZ

In the box write the letter of the choice that is the definition of the term or best answers the question. There is only one correct answer for each question.

1. Pertaining to between the ribs:  
   A) Intracostal  
   B) Infracostal  
   C) Mediastinal  
   D) Intercostal  

2. Pertaining to the opposite side:  
   A) Bilateral  
   B) Contralateral  
   C) Unilateral  
   D) Contraindication  
   E) Ipsilateral  

3. Protrusion of an eyeball:  
   A) Cystocele  
   B) Inguinal hernia  
   C) Exophthalmia  
   D) Ectopic  
   E) Exophthalmos  

4. A congenital anomaly:  
   A) Cerebral ischemia  
   B) Pseudocyesis  
   C) Hemiglossectomy  
   D) Syndactyly  
   E) Acromegaly  

5. Symbiosis:  
   A) Parasitism  
   B) Symmetrical organs  
   C) Biopsy  
   D) Group of symptoms  
   E) Neonatal  

6. Symptoms precede an illness:  
   A) Apnea  
   B) Syndrome  
   C) Euphoria  
   D) Prodome  
   E) Prognosis  

7. Before meals:  
   A) Prenatal  
   B) Anti cibum  
   C) Postpartum  
   D) Antenatal  
   E) Ante cibum  

8. Antibodies:  
   A) Bacteria  
   B) Protein substances made by leukocytes  
   C) Phagocytes  
   D) Produced by erythrocytes to fight disease  
   E) Antibodies  

9. Symphysis:  
   A) Bifurcation  
   B) Symptoms occur tighter  
   C) Living organisms grow together for mutual benefit.  
   D) Bones grow together, as in the pelvis  
   E) Synthesis of substances  

10. Ultrasonography:  
    A) X-ray recording of sound waves  
    B) Amniocentesis  
    C) Sound waves and echoes are used to create an image  
    D) Radioactive material is injected and sound waves are recorded  
    E) Abdominal x-ray recording  

11. Metamorphosis:  
    A) Paralysis of limbs  
    B) Spread of a cancerous growth  
    C) Precancerous  
    D) Change in shape of form  
    E) After death  

12. Hyptertrophy:  
    A) Underdeveloped  
    B) Poor development  
    C) Increase in cell size
13. Excessive sugar in the blood: _____________________________ 
   A) Hypodermic  
   B) Hypoglycemia  
   C) Glycosuria  
   D) Hematuria  
   E) Hyperglycemia  

14. Retroperitoneal: _____________________________ 
   A) Region of the stomach  
   B) Within the chest  
   C) Behind the abdomen  
   D) Within the abdomen  
   E) Below the pelvis  

15. Antigens: _____________________________ 
   A) Streptococci  
   B) Antibiotics  
   C) Antitoxins  
   D) Produced by antibodies  
   E) Penicillins  

16. Return of disease symptoms: _____________________________ 
   A) Prolapse  
   B) Relapse  
   C) Syndrome  
   D) Prodrome  
   E) Remission  

17. Dia-: _____________________________ 
   A) Flow  
   B) Down, lack of  
   C) Complete, through  
   D) Against  
   E) Near  

18. Abductor muscle: _____________________________ 
   A) Bending forward  
   B) Located proximally  
   C) Pertains to both sides  
   D) Carries a limb toward the body  
   E) Carries a limb away from the body  

19. Dyspnea: _____________________________ 
   A) Abnormal formation  
   B) Difficult breathing  
   C) Not able to sleep  
   D) Condition of lack of water  
   E) Not able to breathe  

20. Brady-: _____________________________ 
   A) Fast  
   B) Bad  
   C) Short  
   D) Slow  
   E) Large  

21. Located on the dorsal side of an endocrine gland in the neck: _____________________________ 
   A) Pituitary gland  
   B) Parathyroid glands  
   C) Adrenal glands  
   D) Esophagus  
   E) Trachea  

22. Recombinant DNA: _____________________________ 
   A) Pregnancy that is out of place  
   B) Artificial kidney machine  
   C) Backward development  
   D) Antibodies are made against normal tissue  
   E) Gene from one organism is inserted into another organism  

23. Tachycardia: _____________________________ 
   A) Bad, painful swallowing  
   B) Inability to swallow  
   C) Near the windpipe  
   D) Rapid breathing  
   E) Rapid heartbeat  

24. Epithelium: _____________________________ 
   A) Surface cells that line internal organs and are found in the skin  
   B) Membrane surrounding bone  
   C) Connective tissue that binds muscles to bones  
   D) Adipose tissue  
   E) Above the stomach  

25. Percutaneous: _____________________________ 
   A) Within a vein
B) Through a vein  
C) Through the skin  
D) Surrounding cartilage  
E) Surrounding a bone
Answer Key:  
Chapter 4

Multiple Choice Quiz

1) E  
2) B  
3) E  
4) D  
5) A  
6) D  
7) E  
8) B  
9) D  
10) C  
11) D  
12) C  
13) E  
14) C  
15) A  
16) B  
17) C  
18) E  
19) B  
20) D  
21) B  
22) E  
23) E  
24) A  
25) C

Enter score on face sheet pages 93-95
Chapter Twenty-One

MULTIPLE CHOICE QUIZ

In the box write the letter of the choice that is the definition of the term or best answers to the question. There is only one correct answer for each question.

1. Study of the interaction of drugs and subcellular entities such as enzymes and DNA is called:  
   A) Medicinal chemistry  
   B) Pharmacodynamics  
   C) Chemotherapy  
   D) Molecular pharmacology  
   E) Pharmacokinetics

2. Finding proper antidotes to the harmful effects of drugs is part of the specialty of:  
   A) Molecular pharmacology  
   B) Toxicology  
   C) Medicinal chemistry  
   D) Pharmacodynamics  
   E) Pharmacokinetics

3. Which of the following is a drug generic name?  
   A) Omnipen  
   B) Ampicillin  
   C) Aminopenicillanic acid  
   D) Polycillin  
   E) Principen

4. Which agency holds the legal responsibility for deciding whether a drug may be distributed and sold?  
   A) PDR  
   B) United States Pharmacopeia  
   C) National Institutes of Health  
   D) Hospital Formulary  
   E) FDA

5. The combination of two drugs can cause an effect that is greater than the sum of the individual effects of each:  
   A) Iatrogenic  
   B) Additive action  
   C) Tolerance  
   D) Synergism  
   E) Idiosyncrasy

6. Suppositories are inserted:  
   A) Parenteral administration

7. Drugs are swallowed and absorbed through the intestinal tract:  
   A) Parenteral administration  
   B) Rectal administration  
   C) Inhalation  
   D) Topical  
   E) Oral

8. Drugs are injected through a syringe into a muscle, vein, or body cavity:  
   A) Parenteral administration  
   B) Rectal administration  
   C) Inhalation  
   D) Topical  
   E) Oral

9. Aerosols are administered in this way:  
   A) Parenteral administration  
   B) Rectal administration  
   C) Inhalation  
   D) Topical  
   E) Oral

10. Drugs are applied on the skin:  
    A) Parenteral administration  
    B) Rectal administration  
    C) Inhalation  
    D) Topical  
    E) Oral

11. What is anaphylaxis?  
    A) A type of hypersensitivity reaction  
    B) Factors in the patient’s condition that make the use of a drug dangerous  
    C) A condition produced by the treatment  
    D) Toxic effects that routinely result from the use of a drug  
    E) An antipruritic and antiseptic drug

Name: ___________________________
12. Drugs that block release of a substance that causes allergic reactions are called:  
A) Anticoagulants  
B) Antidiabetics  
C) Anticonvulsants  
D) Anthistamines  
E) Anesthetics

18. What is the effect of a diuretic?  
A) Lowers blood pressure by promoting fluid excretion from the kidney.  
B) Widens blood vessels  
C) Stops blood clotting  
D) Lowers cholesterol  
E) Increases blood pressure by holding water in the body

19. Penicillin is an example of which type of drug?  
A) Antihistamine  
B) Analgesic  
C) Antieptic  
D) Antibiotic  
E) Hypnotic

20. A drug that works against fever is:  
A) Antipruritic  
B) Antipyretic  
C) Anesthetic  
D) Anticoagulant  
E) Hypnotic

21. Drugs that control anxiety and severe disturbances of behavior:  
A) Sedatives  
B) Anticonvulsants  
C) Analgesics  
D) Tranquilizers  
E) Anesthetics

22. Drugs that relax without necessarily producing sleep:  
A) Sedatives  
B) Anticonvulsants  
C) Analgesics  
D) Tranquilizers  
E) Anesthetics

23. Drugs used to relieve pain induce sleep, and suppress cough:  
A) Sedatives  
B) Anticonvulsants  
C) Analgesics  
D) Tranquilizers  
E) Anesthetics
24. Drugs used to treat epilepsy: ____________________________
   A) Sedatives  
   B) Anticonvulsants  
   C) Analgesics  
   D) Tranquilizers  
   E) Anesthetics

25. Drugs used to treat epilepsy: ____________________________
   A) Sedatives  
   B) Anticonvulsants  
   C) Analgesics  
   D) Tranquilizers  
   E) Anesthetics
Answer Key:
Chapter 21

Multiple Choice Quiz

1) D
2) B
3) B
4) E
5) D
6) B
7) E
8) A
9) C
10) D
11) A
12) D
13) C
14) B
15) E
16) A
17) D
18) A
19) D
20) B
21) D
22) A
23) C
24) E
25) B

Enter score on face sheet Pages 93-95
## Terminology

<table>
<thead>
<tr>
<th><strong>Terminology</strong></th>
<th><strong>Meaning</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Adenoma</td>
<td>Tumor of a gland</td>
</tr>
<tr>
<td>Adenitis</td>
<td>Inflammation of a gland</td>
</tr>
<tr>
<td>Arthritis</td>
<td>Inflammation of a joint</td>
</tr>
<tr>
<td>Biology</td>
<td>Study of life</td>
</tr>
<tr>
<td>Biopsy</td>
<td>Removal of living tissue and examination under a microscope</td>
</tr>
<tr>
<td>Carcinoma</td>
<td>Cancerous tumor</td>
</tr>
<tr>
<td>Cardiology</td>
<td>Study of the heart</td>
</tr>
<tr>
<td>Cephalic</td>
<td>Pertaining to the head</td>
</tr>
<tr>
<td>Cerebral</td>
<td>Pertaining to the brain</td>
</tr>
<tr>
<td>Incision</td>
<td>Process of cutting into. <em>Scissors</em> cut</td>
</tr>
<tr>
<td>Excision</td>
<td>Process of cutting out</td>
</tr>
<tr>
<td>Endocrine glands</td>
<td>Glands that secrete hormones within the body</td>
</tr>
<tr>
<td>Cystoscopy</td>
<td>Process of visual examination of the urinary bladder</td>
</tr>
<tr>
<td>Cytology</td>
<td>Study of cells</td>
</tr>
<tr>
<td>Dermatitis</td>
<td>Inflammation of the skin</td>
</tr>
<tr>
<td>Hypodermic</td>
<td>Pertaining to under the skin</td>
</tr>
<tr>
<td>Electrocardiogram</td>
<td>Record of the electricity in the heart</td>
</tr>
<tr>
<td>Electroencephalogram</td>
<td>Record of the electricity of the brain</td>
</tr>
<tr>
<td>Enteritis</td>
<td>Inflammation of the intestines</td>
</tr>
<tr>
<td>Erythrocyte</td>
<td>A red blood cell</td>
</tr>
<tr>
<td>Gastrectomy</td>
<td>Removal of the stomach</td>
</tr>
<tr>
<td>Gastroscopy</td>
<td>Incision of the stomach</td>
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<tr>
<td>Diagnosis</td>
<td>State of complete knowledge; information gathered about a patient’s illness. (Dis = complete; gnos/o = knowledge; -sis= state of)</td>
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<td>Prognosis</td>
<td>State of before knowledge; prediction about the outcome of an illness.</td>
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<td>Study of females and female diseases</td>
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<td>Study of blood</td>
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### Terminology

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<td>An agnostic is a person who professes no (a-) knowledge of God.</td>
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**Chapter One**

Answers to Combining Forms, and Terminology Sections (textbook pages 6-12)
Osteitis
Inflammation of bone
Osteoarthritis
Inflammation of bone and joints (actually degeneration of joint tissue).
Pathology
Study of disease
Pathologist
One who studies diseases, performs autopsies, and examines biopsy samples
Pediatric
Pertaining to treatment of children
Psychology
Study of the mind
Psychiatrist
Specialist in the treatment of the mind
Radiology
Study of x-rays
Renal
Pertaining to the kidney. Ren/o (Latin) is used with –al (Latin), and nephr/o (Greek) is used with –ic (Greek).
Rhinitis
Inflammation of the nose
Sarcoma
Tumor flesh tissue (cancerous tumor of connective tissues, such as bone, muscle, cartilage, fat). Sarcasm is an utterance intended to “cut into the flesh” and a sarcophagus is a box or container (Egyptian coffin) intended to “swallow flesh” Phag/o means to eat of swallow.
Resection
Process of cutting out; removal
Thrombocyte
A clotting cell
Urology
Study of the urinary tract
Cardiac
Pertaining to the heart
Neural
Pertaining to nerves
Arthralgia
Pain of a joint
Erythrocyte
Red blood cell
Nephrectomy
Removal (resection) of a kidney
Leukemia
Blood condition of white cells; malignant (cancerous) condition
Carcinogenic
Pertaining to producing cancer. From the Greek “gennao” meaning “I produce.” Other words to help remember –genic are gene and Genesis.
Pathogenic Iatrogenic
Pertaining to producing disease
Electroencephalogram
Pertaining to producing by treatment (physician).
Gastric
Record of the electricity in the brain.
Neurological
Pertaining to the stomach
Excision
Pertaining to the study of nerves
Gynecologist
Process of cutting out; removal
Cystitis
Specialist in the study of females and female disorders
Endocrinology
Inflammation of the urinary bladder
Hepatoma
Study of the endocrine glands
Biopsy
Tumor (malignant) of the liver
Process of viewing life; removal of living tissue for microscopic examination.
Nephrosis
Abnormal condition of the kidney
Leukocytosis
Abnormal condition (slight increase) of normal white blood cells.
Enteropathy
Disease of the intestines
Adenopathy
Disease of glands
Endoscope
Instrument to visually examine within (the body).
Endoscopy
Process of visually examining within (the body).
Prognosis
State of before knowledge; prediction about the outcome of treatment
Osteotomy
Incision of a bone
Gastroenterology
Process of study of the stomach and intestines
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anemia</td>
<td>A decrease in erythrocytes or hemoglobin</td>
</tr>
<tr>
<td>Autopsy</td>
<td>“self view”—examination of a dead body, understand its function</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>state of complete knowledge; information gathered about a patient’s illness</td>
</tr>
<tr>
<td>Endocrinologist</td>
<td>One who specializes in endocrine glands.</td>
</tr>
<tr>
<td>Epigastric</td>
<td>Pertaining to above the stomach</td>
</tr>
<tr>
<td>Epidermis</td>
<td>Outer layer of skin; above the dermis layer</td>
</tr>
<tr>
<td>Excision</td>
<td>Process of cutting out to resection</td>
</tr>
<tr>
<td>Exocrine glands</td>
<td>Glands that secrete chemicals to the outside of the body</td>
</tr>
<tr>
<td>Hyperglycemia</td>
<td>Condition of increased blood sugar</td>
</tr>
<tr>
<td>Hypogastric</td>
<td>Pertaining to below the stomach</td>
</tr>
<tr>
<td>Incision</td>
<td>Process of cutting into; section</td>
</tr>
<tr>
<td>Pericardium</td>
<td>Structure (membrane) surrounding the heart.</td>
</tr>
<tr>
<td>Prognosis</td>
<td>State of before knowledge - prediction about the outcome of a condition</td>
</tr>
<tr>
<td>Resection</td>
<td>Removal; excision. From the Latin “resecar” meaning “to cut back, trim or curtail.” Thus resection is an operation wherein an organ is “cut back” or removed.</td>
</tr>
<tr>
<td>Retrocardiac</td>
<td>Pertaining to behind the heart</td>
</tr>
<tr>
<td>Subhepatic</td>
<td>Pertaining to below the liver</td>
</tr>
<tr>
<td>Transhepatic</td>
<td>Pertaining to across or through the liver</td>
</tr>
</tbody>
</table>
Chapter Two
Answers to Combining Forms and Terminology Sections (textbook pages 54-57)

<table>
<thead>
<tr>
<th>Terminology</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdominal</td>
<td>Pertaining to the abdomen.</td>
</tr>
<tr>
<td>Adipose</td>
<td>Pertaining to fat.</td>
</tr>
<tr>
<td>Anterior</td>
<td>Pertaining to the front.</td>
</tr>
<tr>
<td>Anabolism</td>
<td>Process of casting up (Building-up or synthesizing process in a cell)</td>
</tr>
<tr>
<td>Cervical</td>
<td>Pertaining to the neck.</td>
</tr>
<tr>
<td>Chondroma</td>
<td>Tumor of cartilage</td>
</tr>
<tr>
<td>Chondrosarcoma</td>
<td>Flesh tumor (malignant) of cartilage</td>
</tr>
<tr>
<td>Chromosomes</td>
<td>“Color bodies”; contain genetic material and are located in the nucleus of cell.</td>
</tr>
<tr>
<td>Coccygeal</td>
<td>Pertaining to the tailbone</td>
</tr>
<tr>
<td>Craniotomy</td>
<td>Incision of the skull</td>
</tr>
<tr>
<td>Cytoplasm</td>
<td>Contents (formation) of the cell (apart from the nucleus and cell membrane.)</td>
</tr>
<tr>
<td>Distal</td>
<td>Pertaining to far (from the beginning of a structure)</td>
</tr>
<tr>
<td>Dorsal</td>
<td>Pertaining to the back</td>
</tr>
<tr>
<td>Histology</td>
<td>Study of tissues</td>
</tr>
<tr>
<td>Iliac</td>
<td>Pertaining to the ilium</td>
</tr>
<tr>
<td>Inguinal</td>
<td>Pertaining to the groin</td>
</tr>
<tr>
<td>Karyotype</td>
<td>Picture (classification) of the nucleus (and its chromosomes)</td>
</tr>
<tr>
<td>Lateral</td>
<td>Pertaining to the side</td>
</tr>
<tr>
<td>Lumbosacral</td>
<td>Pertaining to the lumbar and sacral regions</td>
</tr>
<tr>
<td>Medical</td>
<td>Pertaining to the middle</td>
</tr>
<tr>
<td>Nucleic</td>
<td>Pertaining to the nucleus</td>
</tr>
<tr>
<td>Pelvic</td>
<td>Pertaining to the hip bone</td>
</tr>
<tr>
<td>Posterior</td>
<td>Pertaining to the back, behind</td>
</tr>
<tr>
<td>Proximal</td>
<td>Pertaining to near the beginning of a structure</td>
</tr>
<tr>
<td>Sacral</td>
<td>Pertaining to the sacrum (lower back)</td>
</tr>
<tr>
<td>Sarcoma</td>
<td>Tumor of flesh tissue (malignant)</td>
</tr>
<tr>
<td>Spinal</td>
<td>Pertaining to the spine, backbone</td>
</tr>
<tr>
<td>Epithelial cell</td>
<td>Cell covering the surface of the skin and inner lining of body cavities and tubes.</td>
</tr>
<tr>
<td>Thoracic</td>
<td>Pertaining to the chest</td>
</tr>
<tr>
<td>Thoracotomy</td>
<td>Incision of the chest</td>
</tr>
<tr>
<td>Tracheal</td>
<td>Pertaining to the windpipe</td>
</tr>
<tr>
<td>Umbilical</td>
<td>Pertaining to the navel</td>
</tr>
<tr>
<td>Ventral</td>
<td>Pertaining to the belly side of the body</td>
</tr>
<tr>
<td>Vertebral</td>
<td>Pertaining to the vertebrae</td>
</tr>
<tr>
<td>Visceral</td>
<td>Pertaining to internal organs</td>
</tr>
<tr>
<td>Anabolic</td>
<td>Pertaining to casting up; building up substances (proteins) in the cell</td>
</tr>
<tr>
<td>Catabolism</td>
<td>Process of casting down; breaking down material in the cell to release energy.</td>
</tr>
</tbody>
</table>
### Terminology

<table>
<thead>
<tr>
<th>Abdominal</th>
<th>Pertaining to the abdomen.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adipose</td>
<td>Pertaining to fat.</td>
</tr>
<tr>
<td>Anterior</td>
<td>Pertaining to the front.</td>
</tr>
<tr>
<td>Anabolism</td>
<td>Process of casting up (Building-up or synthesizing process in a cell)</td>
</tr>
<tr>
<td>Cervical</td>
<td>Pertaining to the neck.</td>
</tr>
<tr>
<td>Chondroma</td>
<td>Tumor of cartilage.</td>
</tr>
<tr>
<td>Chondrosarcoma</td>
<td>Flesh tumor (malignant) of cartilage</td>
</tr>
<tr>
<td>Chromosomes</td>
<td>“Color bodies”; contain genetic material and are located in the nucleus of cell.</td>
</tr>
<tr>
<td>Coccygeal</td>
<td>Pertaining to the tailbone</td>
</tr>
<tr>
<td>Craniotomy</td>
<td>Incision of the skull.</td>
</tr>
<tr>
<td>Cytoplasm</td>
<td>Contents (formation) of the cell (apart from the nucleus and cell membrane.)</td>
</tr>
<tr>
<td>Distal</td>
<td>Pertaining to far (from the beginning of a structure)</td>
</tr>
<tr>
<td>Dorsal</td>
<td>Pertaining to the back.</td>
</tr>
<tr>
<td>Histology</td>
<td>Study of tissues</td>
</tr>
<tr>
<td>Iliac</td>
<td>Pertaining to the ilium.</td>
</tr>
<tr>
<td>Inguinal</td>
<td>Pertaining to the groin.</td>
</tr>
<tr>
<td>Karyotype</td>
<td>Picture (classification) of the nucleus (and its chromosomes)</td>
</tr>
<tr>
<td>Lateral</td>
<td>Pertaining to the side.</td>
</tr>
<tr>
<td>Lumbosacral</td>
<td>Pertaining to the lumbar and sacral regions</td>
</tr>
<tr>
<td>Medical</td>
<td>Pertaining to the middle.</td>
</tr>
<tr>
<td>Nucleic</td>
<td>Pertaining to the nucleus.</td>
</tr>
<tr>
<td>Pelvic</td>
<td>Pertaining to the hip bone</td>
</tr>
<tr>
<td>Posterior</td>
<td>Pertaining to the back, behind</td>
</tr>
<tr>
<td>Proximal</td>
<td>Pertaining to near the beginning of a structure</td>
</tr>
<tr>
<td>Sacral</td>
<td>Pertaining to the sacrum (lower back)</td>
</tr>
<tr>
<td>Sarcoma</td>
<td>Tumor of flesh tissue (malignant)</td>
</tr>
<tr>
<td>Spinal</td>
<td>Pertaining to the spine, backbone</td>
</tr>
<tr>
<td>Epithelial cell</td>
<td>Cell covering the surface of the skin and inner lining of body cavities and tubes.</td>
</tr>
<tr>
<td>Thoracic</td>
<td>Pertaining to the chest.</td>
</tr>
<tr>
<td>Thoracotomy</td>
<td>Incision of the chest.</td>
</tr>
<tr>
<td>Tracheal</td>
<td>Pertaining to the windpipe</td>
</tr>
<tr>
<td>Umbilical</td>
<td>Pertaining to the navel.</td>
</tr>
<tr>
<td>Ventral</td>
<td>Pertaining to the belly side of the body</td>
</tr>
<tr>
<td>Vertebral</td>
<td>Pertaining to the vertebrae</td>
</tr>
<tr>
<td>Visceral</td>
<td>Pertaining to internal organs</td>
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<tr>
<td>Anabolic</td>
<td>Pertaining to casting up; building up substances (proteins) in the cell</td>
</tr>
<tr>
<td>Catabolism</td>
<td>Process of casting down; breaking down material in the cell to release energy.</td>
</tr>
</tbody>
</table>

### Meanings

- Pertaining to the abdomen.
- Pertaining to fat.
- Pertaining to the front.
- Pertaining to the neck.
- Tumor of cartilage.
- Flesh tumor (malignant) of cartilage.
- “Color bodies”; contain genetic material and are located in the nucleus of cell.
- Pertaining to the tailbone.
- Incision of the skull.
- Contents (formation) of the cell (apart from the nucleus and cell membrane.)
- Pertaining to far (from the beginning of a structure).
- Pertaining to the back.
- Study of tissues.
- Pertaining to the ilium.
- Pertaining to the groin.
- Picture (classification) of the nucleus (and its chromosomes).
- Pertaining to the side.
- Pertaining to the lumbar and sacral regions.
- Pertaining to the middle.
- Pertaining to the nucleus.
- Pertaining to the hip bone.
- Pertaining to the back, behind.
- Pertaining to near the beginning of a structure.
- Pertaining to the sacrum (lower back).
- Tumor of flesh tissue (malignant).
- Pertaining to the spine, backbone.
- Pertaining to the surface of the skin and inner lining of body cavities and tubes.
- Pertaining to the chest.
- Incision of the chest.
- Pertaining to the windpipe.
- Pertaining to the navel.
- Pertaining to the belly side of the body.
- Pertaining to the vertebrae.
- Pertaining to internal organs.
- Pertaining to casting up; building up substances (proteins) in the cell.
- Process of casting down; breaking down material in the cell to release energy.
<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epigastric</td>
<td>Pertaining to above the stomach</td>
</tr>
<tr>
<td>Hypochondriac regions</td>
<td>Pertaining to under the rib cartilage (area of the abdomen).</td>
</tr>
<tr>
<td>Intervertebral</td>
<td>Pertaining to between the vertebrae</td>
</tr>
<tr>
<td>Metabolism</td>
<td>State of building up (anabolism) and breaking down (catabolism); processes in a cell.</td>
</tr>
</tbody>
</table>
# Chapter Three

## Answers to Combining Forms and Terminology Sections

<table>
<thead>
<tr>
<th>Terminology</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arthralgia</td>
<td>Pain in a joint</td>
</tr>
<tr>
<td>Otalgia</td>
<td>Pain in the ear</td>
</tr>
<tr>
<td>Neualgia</td>
<td>Pain of nerves</td>
</tr>
<tr>
<td>Myalgia</td>
<td>Pain of muscles</td>
</tr>
<tr>
<td>Rectocele</td>
<td>Hernia of the rectum</td>
</tr>
<tr>
<td>Cystocele</td>
<td>Hernia of the urinary bladder</td>
</tr>
<tr>
<td>Throacocentesis</td>
<td>Surgical puncture to remove fluid from the chest (thoracentesis).</td>
</tr>
<tr>
<td>Amniocentesis</td>
<td>Surgical puncture of the amnion</td>
</tr>
<tr>
<td>Abdominocentesis</td>
<td>Surgical puncture of the abdomen</td>
</tr>
<tr>
<td>Streptococcus</td>
<td>Berry-shaped bacterium found in twisted chains.</td>
</tr>
<tr>
<td>Staphylococci</td>
<td>Berry-shaped bacteria in clusters</td>
</tr>
<tr>
<td>Erythrocyte</td>
<td>Red blood cell</td>
</tr>
<tr>
<td>Leukocyte</td>
<td>White blood cell</td>
</tr>
<tr>
<td>Thrombocyte</td>
<td>Clotting cell</td>
</tr>
<tr>
<td>Pleurodynia</td>
<td>Pain in the chest wall muscles that is aggravated by breathing (Literally: pain of the pleura).</td>
</tr>
<tr>
<td>Laryngectomy</td>
<td>Removal of the larynx</td>
</tr>
<tr>
<td>Mastectomy</td>
<td>Removal of a breast</td>
</tr>
<tr>
<td>Anemia</td>
<td>Decrease in erythrocytes or hemoglobin</td>
</tr>
<tr>
<td>Ischemia</td>
<td>To hold back blood from an area of the body</td>
</tr>
<tr>
<td>Carcinogenesis</td>
<td>Condition of producing cancer</td>
</tr>
<tr>
<td>Pathogenesis</td>
<td>Condition of producing disease</td>
</tr>
<tr>
<td>Angiogenesis</td>
<td>Formation of blood vessels</td>
</tr>
<tr>
<td>Carcinogenic</td>
<td>Pertaining to producing cancer</td>
</tr>
<tr>
<td>Osteogenic</td>
<td>Pertaining to produced within bone</td>
</tr>
<tr>
<td>Electroencephalogram</td>
<td>Record of the electricity in the brain</td>
</tr>
<tr>
<td>Myelogram</td>
<td>Record (x-ray) of the spinal cord</td>
</tr>
<tr>
<td>Mammogram</td>
<td>Record (x-ray) of the breast</td>
</tr>
<tr>
<td>Electroencephalograph</td>
<td>Instrument for recording the electricity in the brain</td>
</tr>
<tr>
<td>Electroencephalography</td>
<td>Process of recording the electricity in the brain</td>
</tr>
<tr>
<td>Angiography</td>
<td>Process of recording (x-ray) blood vessels</td>
</tr>
<tr>
<td>Bronchitis</td>
<td>Inflammation of the bronchi</td>
</tr>
<tr>
<td>Tonsillitis</td>
<td>Inflammation of the tonsils</td>
</tr>
<tr>
<td>Phlebitis</td>
<td>Inflammation of veins</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>Study of the eye</td>
</tr>
<tr>
<td>Morphology</td>
<td>Study of shape or form</td>
</tr>
<tr>
<td>Hemolysis</td>
<td>Destruction of blood (breakdown of red blood cells with release of hemoglobin).</td>
</tr>
<tr>
<td>Osteomalacia</td>
<td>Softening of bone</td>
</tr>
<tr>
<td>Chondromalacia</td>
<td>Softening of cartilage</td>
</tr>
<tr>
<td>Acromegaly</td>
<td>Enlargement of extremities</td>
</tr>
<tr>
<td>Splenomegaly</td>
<td>Enlargement of the spleen</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>----------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Myoma</td>
<td>Tumor (benign) of muscle</td>
</tr>
<tr>
<td>Myosarcoma</td>
<td>Tumor (malignant) of muscle (a type of flesh tissue)</td>
</tr>
<tr>
<td>Multiple myeloma</td>
<td>Tumor of bone marrow</td>
</tr>
<tr>
<td>Hematoma</td>
<td>Collection of blood (bruise)</td>
</tr>
<tr>
<td>Biopsy</td>
<td>To view life; microscopic examination of living tissue</td>
</tr>
<tr>
<td>Necropsy</td>
<td>Visual examination of dead bodies; autopsy (most often used for animals)</td>
</tr>
<tr>
<td>Necrosis</td>
<td>Condition of death (of cells)</td>
</tr>
<tr>
<td>Hydronephrosis</td>
<td>Abnormal condition of water (found) in the kidney</td>
</tr>
<tr>
<td>Leukocytosis</td>
<td>Abnormal condition (slight increase in numbers) of normal white blood cells</td>
</tr>
<tr>
<td>Cardiomyopathy</td>
<td>Disease of heart muscle</td>
</tr>
<tr>
<td>Erythropenia</td>
<td>Deficiency of red blood cells</td>
</tr>
<tr>
<td>Leukopenia</td>
<td>Deficiency of white blood cells</td>
</tr>
<tr>
<td>Thrombocytopenia</td>
<td>Deficiency of clotting cells</td>
</tr>
<tr>
<td>Acrophobia</td>
<td>Fear of heights</td>
</tr>
<tr>
<td>Angioplasty</td>
<td>Surgical repair of blood vessels</td>
</tr>
<tr>
<td>Achondroplasia</td>
<td>No (improper) development of cartilage</td>
</tr>
<tr>
<td>Agoraphobia</td>
<td>Fear of being in open, crowded spaces (marketplace)</td>
</tr>
<tr>
<td>Blepharoptosis</td>
<td>Prolapse, sagging of an eyelid</td>
</tr>
<tr>
<td>Arteriosclerosis</td>
<td>Hardening of arteries</td>
</tr>
<tr>
<td>Laparoscope</td>
<td>Instrument to visually examine the abdomen</td>
</tr>
<tr>
<td>Laparoscopy</td>
<td>Process of visual examination of the abdomen</td>
</tr>
<tr>
<td>Metastasis</td>
<td>Beyond control; spreading of a cancerous tumor</td>
</tr>
<tr>
<td>Hemostasis</td>
<td>Stopping the flow of blood (naturally by clotting or artificially by compression)</td>
</tr>
<tr>
<td>Colostomy</td>
<td>New opening of the colon (to the outside of the body)</td>
</tr>
<tr>
<td>Tracheostomy</td>
<td>New opening of the windpipe (to the outside of the body)</td>
</tr>
<tr>
<td>Hydrotherapy</td>
<td>Treatment with water</td>
</tr>
<tr>
<td>Chemotherapy</td>
<td>Treatment with drugs</td>
</tr>
<tr>
<td>Radiotherapy</td>
<td>Treatment with x-rays</td>
</tr>
<tr>
<td>Laparotomy</td>
<td>Incision into the abdomen</td>
</tr>
<tr>
<td>Phlebotomy</td>
<td>Incision of a vein</td>
</tr>
<tr>
<td>Hypertrophy</td>
<td>Excessive development</td>
</tr>
<tr>
<td>Atrophy</td>
<td>No development; wasting away of tissue</td>
</tr>
<tr>
<td>Radiographer</td>
<td>One who records x-ray</td>
</tr>
<tr>
<td>Leukemia</td>
<td>Condition of increase in white cells (malignancy)</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>Condition (abnormal) of lungs</td>
</tr>
<tr>
<td>Nephrologist</td>
<td>Specialist in the study of the kidney</td>
</tr>
<tr>
<td>Arteriole</td>
<td>Small artery</td>
</tr>
<tr>
<td>Venule</td>
<td>Small vein</td>
</tr>
<tr>
<td>Pericardium</td>
<td>Structure surrounding the heart</td>
</tr>
<tr>
<td>Nephropathy</td>
<td>Disease of the kidney</td>
</tr>
<tr>
<td>Cardiac</td>
<td>Pertaining to the heart</td>
</tr>
<tr>
<td>Peritoneal</td>
<td>Pertaining to the peritoneum</td>
</tr>
<tr>
<td>Inguinal</td>
<td>Pertaining to the groin</td>
</tr>
<tr>
<td>Pleural</td>
<td>Pertaining to the pleura</td>
</tr>
<tr>
<td>Tonsillar</td>
<td>Pertaining to tonsils</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Pulmonary</td>
<td>Pertaining to the lungs</td>
</tr>
<tr>
<td>Axillary</td>
<td>Pertaining to the armpit</td>
</tr>
<tr>
<td>Laryngeal</td>
<td>Pertaining to the voice box</td>
</tr>
<tr>
<td>Chronic</td>
<td>Long-term; over a long period of time</td>
</tr>
<tr>
<td>Acute</td>
<td>Sharp, sudden, severe</td>
</tr>
<tr>
<td>Pathological</td>
<td>Pertaining to the study of disease</td>
</tr>
<tr>
<td>Adenoids</td>
<td>Resembling glands (lymphatic tissue in the throat, near the nose).</td>
</tr>
<tr>
<td>Adipose</td>
<td>Pertaining to fat</td>
</tr>
<tr>
<td>Mucous</td>
<td>Pertaining to mucus</td>
</tr>
<tr>
<td>Mucus</td>
<td>The substance secreted from mucous membranes</td>
</tr>
<tr>
<td>Necrotic</td>
<td>Pertaining to death (of cells).</td>
</tr>
<tr>
<td><strong>Terminology</strong></td>
<td><strong>Meaning</strong></td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Apnea</td>
<td>Not breathing.</td>
</tr>
<tr>
<td>Anoxia</td>
<td>Without oxygen (decrease in tissues).</td>
</tr>
<tr>
<td>Abnormal</td>
<td>Pertaining to away from the norm (rule); not regular</td>
</tr>
<tr>
<td>Abductor</td>
<td>One who (muscle which) leads away from the body. To <em>abduct</em> means to carry away by force; kidnap</td>
</tr>
<tr>
<td>Adductor</td>
<td>One who (muscle which) leads toward the body. To <em>admit</em> means to send toward or permit entrance.</td>
</tr>
<tr>
<td>Adrenal glands</td>
<td>Endocrine glands located above (toward) the kidneys.</td>
</tr>
<tr>
<td>Anabolism</td>
<td>Process of casting (building) up materials (proteins) within cells.</td>
</tr>
<tr>
<td>Analysis</td>
<td>To separate (apart). <em>Psychoanalysis</em> is a psychiatric treatment that explores the mind. Urinalysis (urin/o + (analysis) is laboratory examination of urine to aid in diagnosis.</td>
</tr>
<tr>
<td>Ante cibum</td>
<td>Before meals</td>
</tr>
<tr>
<td>Anteflexion</td>
<td>Bending forward</td>
</tr>
<tr>
<td>Ante partum</td>
<td>Before birth</td>
</tr>
<tr>
<td>Antisepsis</td>
<td>Condition against infection</td>
</tr>
<tr>
<td>Antibiotic</td>
<td>Pertaining to against life (germ life).</td>
</tr>
<tr>
<td>Antigen</td>
<td>A substance (usually foreign) that stimulates the production of antibodies</td>
</tr>
<tr>
<td>Antibody</td>
<td>Protein substance made in the body to destroy foreign antigens. A substance (antibody) produced in response to and capable of neutralizing a toxin (such as those causing diphtheria or tetanus). Antirenin contains antitoxin specific for an animal or insect venom</td>
</tr>
<tr>
<td>Antitoxin</td>
<td>Related to making antibodies (immune substances) against one’s own cells and tissues.</td>
</tr>
<tr>
<td>Autoimmune</td>
<td>Forking (branching) into two; as the trachea bifurcates into two individual tubes.</td>
</tr>
<tr>
<td>Bifurcation</td>
<td>Pertaining to two sides</td>
</tr>
<tr>
<td>Bilateral</td>
<td>Condition of slow heart beat</td>
</tr>
<tr>
<td>Bradycardia</td>
<td>Process of casting down materials (sugar) to release energy in cells.</td>
</tr>
<tr>
<td>Catabolism</td>
<td>Irregularity at birth</td>
</tr>
<tr>
<td>Congenital anomaly</td>
<td>To tie (bind) together. A <em>conference</em> (fer- means to carry or bring) is where people gather together or meat.</td>
</tr>
<tr>
<td>Connective</td>
<td>To point out against; as reasons why a drug should not be taken</td>
</tr>
<tr>
<td>Contraindication</td>
<td>Pertaining to the opposite side.</td>
</tr>
<tr>
<td>Contralateral</td>
<td>Condition of lack of water</td>
</tr>
<tr>
<td>Dehydration</td>
<td>To measure through; as the diameter of a circle</td>
</tr>
<tr>
<td>Diameter</td>
<td>To flow through; water is not properly absorbed through the walls of the colon</td>
</tr>
<tr>
<td>Dialysis</td>
<td>Complete separation; two types are hemodialysis and peritoneal dialysis</td>
</tr>
<tr>
<td>Dyspnea</td>
<td>Difficult breathing</td>
</tr>
<tr>
<td>Dysplasia</td>
<td>Abnormal (“bad”) development of formation</td>
</tr>
<tr>
<td>Ectopic pregnancy</td>
<td>Pregnancy out of the normal place (usually in the fallopian tubes).</td>
</tr>
<tr>
<td>Endotracheal</td>
<td>Pertaining to within the trachea</td>
</tr>
</tbody>
</table>
Endoscope
  Instrument to view within the body; gastroscope, bronchoscope, laparoscope.

Endocardium
  Inner lining (membrane) of the heart.

Epithelium
  Skin cell; latterly, “upon a nipple.”

Euthyroid
  Normal thyroid function.

Euphoria
  Good feeling, “high” A eulogy is a speech saying good things about a person after his/her death.

Exophthalmos
  Eyeballs that protrude

Hemiglossectomy
  Removal of half the tongue

Hyperplasia
  Condition of increased formation (increase in number of cells).

Hypertrophy
  Increase in development; increase in size of cells.

Hyperglycemia
  Increase in blood sugar

Hyperdermic
  Pertaining to below the skin

Hypoglycemia
  Decrease in blood sugar

Insomniac
  Pertaining to inability to sleep

Incision
  Process of cutting into; sectioning

Infracostal
  Pertaining to below ribs Pertain to

Intercostals
  to between the ribs Pertain to

Intravenous
  within a vein Pertaining to

Macrocephalic
  enlarged head Harmful, bad;

Malignant
  cancerous condition

Malaise
  Feeling of discomfort; “bad feeling”

Metamorphosis
  Condition of change of shape or form. A worm-like larva undergoes a change in shape to become a butterfly. This is an example of metamorphosis.

Metastasis
  Beyond control; spreading of a cancerous tumor.

Metacarpal bones
  Five hand bones (beyond the wrist).

Microscope
  Instrument to view small objects

Neoplasm
  New growth; new formation (tumor).

Neonatal
  Pertaining to a newborn (infant).

Pancytopenia
  Condition of decrease in all cells (blood cells).

Parathyroid glands
  Endocrine glands located near (on the dorsal side of) the thyroid gland.

Paralysis
  Abnormal destruction (of nerves) leading to loss of muscle function

Percutaneous
  Pertaining to through the skin

Pericardium
  Membrane surrounding the heart

Periosteum
  Membrane surrounding the bone

Polymorphonuclear
  Pertaining to a many-shaped nucleus; a type of white blood cell

Polyneuritis
  Inflammation of many nerves

Post mortem
  After death

Pastnatal
  Pertaining to after birth

Precancerosis
  Pertaining to before cancer; a lesion that may become cancerous

Prenatal
  Pertaining to before birth.

Prodrome
  Symptoms that appear before the onset of a more serious illness

Prolapse
  Sliding forward or downward
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pseudocyesis</td>
<td>State of false pregnancy</td>
</tr>
<tr>
<td>Relapse</td>
<td>A sliding back; recurrence of symptoms of disease</td>
</tr>
<tr>
<td>Remission</td>
<td>To send back; disappearance of symptoms of disease</td>
</tr>
<tr>
<td>Recombinant DNA</td>
<td>Inserting a gene (region of DNA) from one organism into the DNA of another organism</td>
</tr>
<tr>
<td>Retroperitoneal</td>
<td>Pertaining to behind the peritoneum</td>
</tr>
<tr>
<td>Retroflexion</td>
<td>Bending backward</td>
</tr>
<tr>
<td>Subcutaneous</td>
<td>Pertaining to under the skin</td>
</tr>
<tr>
<td>Suprathoracic</td>
<td>Pertaining to above the chest</td>
</tr>
<tr>
<td>Suprarenal glands</td>
<td>Endocrine glands located above each kidney (adrenal glands)</td>
</tr>
<tr>
<td>Syndactyly</td>
<td>Condition of webbed (held together) fingers or toes; a congenital anomaly.</td>
</tr>
<tr>
<td>Synthesis</td>
<td>To put, place together, as in protein synthesis or photosynthesis.</td>
</tr>
<tr>
<td>Syndrome</td>
<td>A group of symptoms that run (occur) together.</td>
</tr>
<tr>
<td></td>
<td>In synchrony means timed (chron/o) together.</td>
</tr>
<tr>
<td>Symbiosis</td>
<td>Condition or state of “life together”; two organisms living together for mutual benefit or not (parasitism).</td>
</tr>
<tr>
<td>Symmetry</td>
<td>State of “measurement together”; equality of parts; mirror images.</td>
</tr>
<tr>
<td>Symphysis</td>
<td>To grow together; bones that grow together at the joint.</td>
</tr>
<tr>
<td>Tachypnea</td>
<td>Rapid breathing</td>
</tr>
<tr>
<td>Transfusion</td>
<td>To pour across, as in transferring blood from one person to another.</td>
</tr>
<tr>
<td>Transurethral</td>
<td>Pertaining to through the urethra</td>
</tr>
<tr>
<td>Ultrasonography</td>
<td>Process of recording ultrasound (beyond the normal range) waves.</td>
</tr>
<tr>
<td>Unilateral</td>
<td>Pertaining to one side.</td>
</tr>
</tbody>
</table>
# Answers to Combining Forms and Terminology Sections

<table>
<thead>
<tr>
<th>Terminology</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerosol</td>
<td>Particles of drug (in solution) suspended in air.</td>
</tr>
<tr>
<td>Analgesic</td>
<td>Pertaining to without sensitivity to pain.</td>
</tr>
<tr>
<td>Bronchodilator</td>
<td>Drug that relaxes the smooth muscle lining bronchial tubes and is used to treat asthma, emphysema, and chronic bronchitis.</td>
</tr>
<tr>
<td>Chemotherapy</td>
<td>Treatment using drugs</td>
</tr>
<tr>
<td>Idiosyncrasy</td>
<td>An unexpected effect of a drug that is peculiar to an individual</td>
</tr>
<tr>
<td>Dubcutaneous</td>
<td>Pertaining to under the skin</td>
</tr>
<tr>
<td>Hypodermic</td>
<td>Pertaining to under the skin</td>
</tr>
<tr>
<td>Synergism</td>
<td>Condition of working together; the drug action in which the combination of two drugs causes an effect that is greater that the sum of the individual effects of each drug alone.</td>
</tr>
<tr>
<td>Anesthesia</td>
<td>Condition of being without nervous sensation</td>
</tr>
<tr>
<td>Antihistamine</td>
<td>An agent that acts against histamine production in the body. Histamine is released as a result of an allergic reaction</td>
</tr>
<tr>
<td>Hypnotic</td>
<td>Pertaining to a condition of sleep (a trance-like state)</td>
</tr>
<tr>
<td>Iatrogenic</td>
<td>Pertaining to and adverse condition that is caused or produced by a physician or a specific treatment</td>
</tr>
<tr>
<td>Sublingual</td>
<td>Pertaining to under the tongue</td>
</tr>
<tr>
<td>Erythromycin</td>
<td>An antibiotic that is produced form a red (erythr/o) mold (myc/o)</td>
</tr>
<tr>
<td>Narcotic</td>
<td>Pertaining to a substance that produces stupor (has morphine or opium-like action)</td>
</tr>
<tr>
<td>Pharmacology</td>
<td>Study of drugs</td>
</tr>
<tr>
<td>Antipruritic</td>
<td>Pertaining to an agent that acts to relieve itching</td>
</tr>
<tr>
<td>Antipyretic</td>
<td>Pertaining to an agent that acts to relieve fever</td>
</tr>
<tr>
<td>Intrathecal</td>
<td>Pertaining to within the sheath of membranes surrounding the spinal cord</td>
</tr>
<tr>
<td>Toxic</td>
<td>Pertaining to poison</td>
</tr>
<tr>
<td>Toxicology</td>
<td>Study of poisons and the harmful effects of drugs</td>
</tr>
<tr>
<td>Vasodilator</td>
<td>Substance that causes blood vessels to widen</td>
</tr>
<tr>
<td>Intracaneous</td>
<td>Pertaining to within a vein</td>
</tr>
<tr>
<td>Vitamin</td>
<td>A substance in foods that is essential in small quantities for growth and good health (life-giving amines).</td>
</tr>
<tr>
<td>Anaphlaxis</td>
<td>A hypersensitive state of the body to a foreign protein (antigen) or drug Can produce severe symptoms and shock</td>
</tr>
<tr>
<td>Antidote</td>
<td>An agent given to counteract unwanted effect of a drug</td>
</tr>
<tr>
<td>Antibiotic</td>
<td>A substance that acts against microorganisms, such as bacteria</td>
</tr>
<tr>
<td>Contraindication</td>
<td>Factor in the patient’s condition that prevents the use of a drug or treatment</td>
</tr>
<tr>
<td>Parenteral</td>
<td>Pertaining to injection of drugs other that through the intestines</td>
</tr>
<tr>
<td>Synergistic</td>
<td>Pertaining to synergism (the drug action in which the sum of the effects of giving two drugs together is greater than that of giving each drug alone).</td>
</tr>
</tbody>
</table>
Directions: Students will

1. Take the Grammar tests.
2. Correct all questions. Only the first section has explanations of answers
3. Fill in information on face sheet, which is in front of all tests.
4. Return work to HESI staff, arrange tutoring or conference to give go-ahead on taking actual HESI test.

Important: Fill in the blanks on the face sheet to assist the HESI staff in assessing your skills and weaknesses.

Your goal is to achieve 80% minimum on any exercise.

¾ To calculate Total number of correct answers, subtract number of incorrect answers from total number of problems

¾ To calculate Percent correct: multiply number correct X 100, divide this number by total number of problems.

Example: 80 correct out of 100: 80 x 100= 8000 8000 divided by 100= 80 or 80%

OVERALL GRAMMAR TEST SCORE

Total number of problems: __303__
Number correct: _____ Multiply number correct X 100= _______
Divide by total number of problems= _____ %

Tutor will review for areas to work on in vocabulary.

Areas to work on: __________________. __________________. __________________. __________________
1. Exercise One: Problems with Verbs (Part 1)

Total Number of Questions  15 _____
Total Number of correct answers_________ X 100=_____ Divide this number by total number of questions

Percent Correct___________

2. Exercise Two: Problems with Verbs (Part 2)

Total Number of Questions  15 _____
Total Number of correct answers_________ X 100=_____ Divide this number by total number of questions

Percent Correct___________

3. Exercise Three: Problems with Verbs (Part 3)

Total Number of Questions  15 _____
Total Number of correct answers_________ X 100=_____ Divide this number by total number of questions

Percent Correct___________

4. Exercise Fourteen: Problems with Introductory Verbal Modifiers

Total Number of Questions  25 _____
Total Number of correct answers_________ X 100=_____ Divide this number by total number of questions

Percent Correct___________

5. Exercise Fifteen: Problems with Parallel Structure

Total Number of Questions  25 _____
Total Number of correct answers_________ X 100=_____ Divide this number by total number of questions

Percent Correct___________

6. Exercise Eighteen: Problems with Structure

Total Number of Questions  25 _____
Total Number of correct answers_________ X 100=_____ Divide this number by total number of questions

Percent Correct___________
7. Lesson 5: Sentence Structure

Total Number of Questions  _5_  
Total Number of correct answers _______ X 100=_____ Divide this number by total number of questions

Percent Correct___________

8. Lesson 6: Sentence Structure--- Parallel structure

Total Number of Questions  _6_  
Total Number of correct answers _______ X 100=_____ Divide this number by total number of questions

Percent Correct___________

9. PLURALS—Exercises 2, 3, 4, 5

Total Number of Questions  _47_  
Total Number of correct answers _______ X 100=_____ Divide this number by total number of questions

Percent Correct___________

10. VERBS—Exercises 12, 13

Total Number of Questions  _46_  
Total Number of correct answers _______ X 100=_____ Divide this number by total number of questions

Percent Correct___________

11. VERBS---(Subject- Verb Agreement) Lesson 12, Exercise 19

Total Number of Questions  _29_  
Total Number of correct answers _______ X 100=_____ Divide this number by total number of questions

Percent Correct___________

12. Gerunds and Infinitives

Total Number of Questions  _50_  
Total Number of correct answers _______ X 100=_____ Divide this number by total number of questions

Percent Correct___________

Next step: Make sure to complete overall score on face sheet. See HESI staff for final assessment of our study packet and go-ahead to take test.
Directions: Four words of phrases, marked (A), (B), (C), and (D), are given beneath each incomplete sentence. You are to choose the one word or phrase that best completes the sentence. Then, on your answer sheet, find the number of the question and blacken the space that corresponds to the letter of the answer you have chosen so that the letter inside the oval cannot be seen.

PREVIEW: VERBS

In some sentences in Part A of the Structure and Written Expression Section, you will be asked to identify the correct verb. In fact, most of the sentences in this part are verb problems.

A verb is a word or phrase that expresses action or condition. A verb can be classified as transitive or intransitive according to whether it requires a complement; it can be classified further according to the kind of complement it requires, including not only nouns, pronouns, adjectives, and adverbs but also –ing forms or infinitives.

1. Al’s doctor insists ____ for a few days.
   (A) that he is resting
   (B) his resting
   (C) him to rest
   (D) that he rest

2. I don’t like iced tea, and ________.
   (A) she doesn’t too
   (B) either doesn’t she
   (C) neither does she
   (D) she doesn’t neither

3. We wish that you ________ such a lot of work, because we know that you would have enjoyed the party.
   (A) hadn’t had
   (B) hadn’t
   (C) didn’t have had
   (D) hadn’t have

4. Since your roommate is visiting her family this weekend, ________ you like to have dinner with us tonight?
   (A) Will
   (B) won’t
   (C) do
   (D) wouldn’t

5. Please ________ photocopies of documents.
   (A) not to submit
   (B) do not submit
   (C) no submit
   (D) not submit

6. I ________ bacon and eggs every morning.
   (A) am used to eat
   (B) used to eating
   (C) am used to eating
   (D) use to eat

7. The team really looks good tonight because the coach had them ________ every night this week.
   (A) practice
   (B) to practice
   (C) practiced
   (D) the practice

8. Would you mind ________ , please?
   (A) to answer the telephone
   (B) answering the telephone
   (C) answer the telephone
   (D) to the telephone answering
Exercise One: Problems with Verbs (Part 1)

9. You _____ your seats today if you want to go to the game. (A) had better to reserve (C) had better reserve
   (B) had to better reserve (D) had to reserve better

10. If it _____ so late we could have coffee.
    (A) Wasn’t   (C) weren’t
    (B) Isn’t    (D) not be

11. Your sister used to visit you quite often, ________?
    (A) didn’t she   (C) wouldn’t she
    (B) doesn’t she  (D) hadn’t she

12. If Bob _______ with us, he would have had a good time.
    (A) would come   (C) had come
    (B) would have come (D) came

13. Frankly, I’d rather you ______ anything about it for the time being.
    (A) do   (C) don’t
    (B) didn’t do (D) didn’t

14. Since they aren’t answering their telephone, they ______.
    (A) must have left (C) need have left
    (B) should have left (D) can have left

15. We were hurrying because we thought that the bell ________.
    (A) had already rang   (C) had already rung
    (B) had already rang   (D) have already ringing
EXERCISE TWO: PROBLEMS WITH VERBS (PART 2)

1. I hadn’t expected James to apologize but I had hoped _______.
   (A) him calling me  (C) him to call me
   (B) that he would call me  (D) that he call me

2. My husband lived at home before we were married, and so _______.
   (A) did I  (C) I had
   (B) had I  (D) I did

3. Does your new secretary ________ shorthand?
   (A) know to take  (C) know how to take
   (B) know how to take  (D) know how taking

4. Tommy had his big brother ________ his shoes for him.
   (A) to tie  (C) tied
   (B) tie  (D) tying

5. I wish that the weather ______________ not so warm.
   (A) begin  (C) were
   (B) be  (D) is

6. His English teacher recommends that he ________ a regular degree program.
   (A) begin  (C) will begin
   (B) begins  (D) is beginning

7. Let’s go out for dinner, ________________ ?
   (A) will we  (C) shall we
   (B) don’t we  (D) are we

8. I’d __________ the operation unless it is absolutely necessary.
   (A) rather not have  (C) rather not to have
   (B) not rather had  (D) rather not having

9. Would you please ________ write on the test books?
   (A) don’t  (C) not
   (B) not to  (D) to not

10. The old man asked her to move because he ________ in that chair.
    (A) used to sit  (C) used to sitting
    (B) was used to sit  (D) was used to sitting

11. After the way she treated you, if I ________ in your place, I wouldn’t return the call.
    (A) be  (C) was
    (B) am  (D) were

12. If I ________ the flu I would have gone with you.
    (A) hadn’t  (C) didn’t have
    (B) hadn’t had  (D) wouldn’t have had

13. he’s taken his medicine, ________ ?
    (A) hasn’t he  (C) doesn’t he
    (B) didn’t he  (D) isn’t he

14. Your mother and I are looking forward ________ you.
    (A) of seeing  (C) to see
    (B) for seeing  (D) to seeing

15. It is imperative that you ________ there in person.
    (A) be  (C) will
    (B) will be  (D) are
EXERCISE THREE: PROBLEMS WITH VERBS (PART 3)

1. The Brakes need________________
   (A) adjusted  (C) to adjust
   (B) to adjustment  (D) adjusting

2. I wish that we ____________ with my brother when he flies to England next week.
   (A) could go  (C) will go
   (B) had gone  (D) are going

3. Are you sure Miss Smith ____________ use the new equipment?
   (A) knows to  (C) knows how to
   (B) knows the  (D) knows how

4. Mary and John ____________ to the parties at the Student Union every Friday.
   (A) used to go  (C) are used to go
   (B) use to go  (D) were used to go

5. You ____________ me, because I didn’t say that.
   (A) must misunderstand  (C) must have misunderstood
   (B) must be misunderstanding  (D) had to misunderstand

6. ____________ you rather sit by the window?
   (A) Don’t  (C) Wouldn’t
   (B) Will  (D) Won’t

7. His government insisted that he ____________ until he finished his degree.
   (A) should stay  (C) stayed
   (B) shall stay  (D) stay

8. After he had researched and ____________ his paper, he found some additional material that he should have included.
   (A) wrote  (C) writing
   (B) written  (D) have written

9. The man who was driving the truck would not admit that he had been at fault, and ____________.
   (A) neither the other driver  (C) neither had the other driver
   (B) neither would the other driver  (D) the other driver neither

10. If ____________ rain, we’ll have the party outside.
    (A) wouldn’t  (C) didn’t
    (B) doesn’t  (D) won’t

11. Excuse me, but it is time to have you temperature ____________.
    (A) taking  (C) take
    (B) to take  (D) taken

12. Almost everyone fails ____________ the driver’s test on the first try.
    (A) passing  (C) to pass
    (B) to have passed  (D) in passing

13. Mike had hoped ____________ his letter.
    (A) her to answer  (C) that she would answer
    (B) that she answer  (D) her answering

14. I think that you had better ____________ earlier so that you can get to class on time.
    (A) to start to get up  (C) start getting up
    (B) started getting up  (D) to get up

15. Today’s weather isn’t as cold as it was yesterday, ____________?
    (A) wasn’t it  (C) isn’t it
    (B) was it  (D) is it
EXERCISE FOURTEEN:
PROBLEMS WITH INTRODUCTORY VERBAL MODIFIERS

REVIEW INTRODUCTORY VERBAL MODIFIERS

In some sentences in Part B, you will be asked to identify errors in introductory verbal modifiers and the subjects that they modify.

Introductory verbal modifiers are –ing forms, participles, and infinitives. A phrase with an introductory verbal modifier occurs at the beginning of a sentence and is followed by a comma. The subject modified by an introductory verbal modifier must follow the comma.

If the correct subject does not follow the comma, then the meaning of the sentence is changed. Often the changed meaning is not logical.

1. After finishing Roots, the one-hundred-year history of a black American family, the Nobel Prize Committee awarded author Alex Haley a special citation for literary excellence.
   (A) (B) (C) (D)

2. A competitive sport, gymnasts perform before officials who must use their judgment along with their knowledge of the rules to determine the relative skill of each participant.
   (A) (B) (C) (D)

3. To remove stains from permanent press clothing, carefully soaking in cold water before washing with one’s regular detergent.
   (A) (B) (C) (D)

4. Found in Tanzania by Mary Leakey, some archeologists estimated that the three-million-year-old fossils were the oldest human remains to be discovered.
   (A) (B) (C) (D)

5. After fighting the blaze for three days, the supertanker was hauled toward open seas in an effort to save the southern Caribbean from the worst oil spill in history.
   (A) (B) (C) (D)

6. According to the conditions of their scholarships, after finishing their degrees, the University will employ them for three years.
   (A) (B) (C) (D)

7. Originally having been buried in Spain, and later moved to Santo Domingo in the Dominican Republic, Columbus’s final resting place is Havana, Cuba.
   (A) (B) (C) (D)
8. Written by Neil Simon, New York audiences received the new play enthusiastically at the world (A) (B) (C) (D) premiere Saturday evening.

9. By migrating to a warmer climate every fall, survival is assured for another year. (A) (B) (C) (D)

10. Saddened by the actor's sudden death, a memorial fund will be established so that family and (A) (B) (C) friends can make donations in his name to The American Cancer Society. (D)

11. To prevent cavities, dental floss should be used daily after brushing one's teeth. (A) (B) (C) (D)

12. While researching the problem of violent crime, the Senate committee's discovery that handguns (A) (B) (C) (D) were used to commit 54 percent of all murders in large cities.

13. Trying to pay for a purchase with cash, salespersons often ask for credit cards instead. (A) (B) (C)

14. After reviewing the curriculum, several significant changes were made in traditional business (A) (B) (C) (D) programs at Harvard University.

15. Having hit more home runs than any other player in the history of baseball, Hank Aaron's record (A) (B) (C) (D) is famous.

16. Banned in the U.S., the effect of fluorocarbons continues at a level that could eventually damage (A) (B) (C) (D) the ozone layer, and bring about such serious results as high risk of skin cancer and global climate changes.

17. To avoid jet lag, many doctors recommend that their patients begin adjusting one week before (A) (B) (C) (D) departure time by shifting one hour each day toward the new time schedule.

18. After cooking in the microwave oven for five minutes, one should put most meat dishes on a (A) (B) (C) platter to cool. (D)
19. Traditionally named for women, but recently Bob was chosen as the first make name for a hurricane.

20. While testifying, their answers were recorded by the court stenographer.

21. By reading the instructions carefully, mistakes on the examination can be avoided.

22. Having been divorced, her credit could not be established in spite of her high income.

23. Attempting to smuggle drugs into the country, custom officials apprehended them, and took them to police headquarters for questioning.

24. While trying to build a tunnel through the Blue Ridge Mountains, coal was discovered at the construction site.

25. Founded in 1919, students and teachers who are interested in spending several months abroad may benefit from educational programs administered by the Institute for International Education.
EXERCISE FIFTEEN:
PROBLEMS WITH PARALLEL STRUCTURE

PREVIEW: PARALLEL STRUCTURE

In some sentences in Part B, you will be asked to identify errors in parallel structure. Parallel structure is the use of the same grammatical structures for related ideas of equal importance. Related ideas of equal importance often occur in the form of a list. Sometimes related ideas of equal importance are connected by conjunctions, such as and, but, and or.

1. The committee decided to cancel its law suit, to approve the contract, and that it would adjourn the meeting.
   (A)     (B)     (C)     (D)

2. Air travel is fast, safe, and it is convenient.
   (A)     (B)     (C)     (D)

3. Rock music is not only popular in the United States but also abroad.
   (A)     (B)     (C)     (D)

4. Every day the watchman would lock the doors, turning on the spot lights, and walk around the building.
   (A)     (B)     (C)     (D)

5. To control quality and making decisions about production are among the many responsibilities of an industrial engineer.
   (A)     (B)     (C)     (D)

6. I suggest that the instructor react to the situation by changing the textbook instead of to modify the objectives of the course.
   (A)     (B)     (C)     (D)

7. Dr. Johnson, the first woman elected president of the University, was intelligent, capable, and awareness of the problems to be solved.
   (A)     (B)     (C)     (D)

8. The insurance program used to include not only employees but their families.
   (A)     (B)     (C)     (D)

9. The six main parts of a business letter are the address, the inside address, the salutation, the body, the closing, and signing your name.
   (A)     (B)     (C)     (D)

10. We solved the problem by using a computer rather than to do it all by hand.
    (A)     (B)     (C)     (D)
11. To read literature and being introduced to a different culture are two excellent reasons for studying a foreign language.

12. The proposed increase in the utility rate was neither a fair request and not a practical one.

13. Tom is the best candidate for the position because he understands the project, knows the University, and who works very hard.

14. Ice skating and to go skiing are popular winter sports in the Northern United States.

15. The surgeon examined the patient quickly, and then the operation was begun.

16. Because we were not sure where the house was, and because of the time, we decided to ask for directions.

17. To treat minor diarrhea, drink plenty of liquids, especially tea, water, and carbonated beverages, eat soup, yogurt, salty crackers, and bananas, and avoiding milk, butter, eggs, and meat for twenty-four hours.

18. The new electric typewriters are equipped not only with an element for foreign languages but also a key for correcting errors automatically.

19. The examiner did not know whether to report the student for cheating or warning him first.

20. Jim had spent his vacation traveling in Arizona visiting some of the Indian reservations, and had finished several paintings that he had begun last year.

21. The Smithsonian Institute is famous because it contains such interesting exhibits as the flag that was raised over Fort McHenry in 1812, the airplane that the Wright brothers built for their first flight at Kitty hawk and there are the gowns worn by every first lady since Martha Washington.
11. To read literature and being introduced (A) to a different culture are two excellent reasons for studying a (B) (C) (D) foreign language.

12. The proposed increase in the utility rate was neither a fair request (A) and not a practical one. (B) (C) (D)

13. Tom is the best candidate (A) for the position because he understands the project, knows the University, (B) and who works very hard. (C) (D)

14. Ice skating and to go skiing are popular (A) winter sports in the Northern United States. (B) (C) (D)

15. The surgeon examined the patient quickly, and then the operation was begun. (A) (B) (C) (D)

16. Because we were not sure where the house was, and because of the time, we decided to ask for (A) (B) (C) (D) directions.

17. To treat minor diarrhea, drink plenty of liquids, especially tea, water, and carbonated beverages, eat (A) soup, yogurt, salty crackers, and bananas, and avoiding (B) milk, butter, eggs, and meat for twenty-four (C) (D) hours.

18. The new electric typewriters are equipped not only (A) with an element for foreign languages but also a key (B) for correcting errors automatically. (C) (D)

19. The examiner did not know whether to report the student for cheating (A) or warning him first. (B) (C) (D)

20. Jim had spent (A) his vacation traveling in Arizona visiting some of the Indian reservations, and had (B) finished several paintings that he had begun last year. (C) (D)

21. The Smithsonian Institute is famous because it contains such interesting exhibits as the flag that was (A) raised over Fort McHenry in 1812, the airplane that the Wright brothers built (B) for their first flight at Kitty (C) hawk and there are (D) the gowns worn by every first lady since Martha Washington.

Exercise Fifteen: Problems with Parallel Structure
22. Please send me the smallest, most recently published, and less expensive dictionary that you have available.

23. In order to become a law, a bill must be passed not only by the Senate but also the House of Representatives.

24. The cloverleaf is a common engineering design for expressways that permits traffic between two intersecting highways to move more safely, efficiently, and with ease.

25. A new product should be judged not by the promises made in commercials and advertisements, but also by the results demonstrated in actual use.
In some sentences in Part B, you will be asked to identify errors in structure.

Remember, structure is the correct use of verbs, pronouns, nouns, modifiers, comparatives, and connectors.

1. Of the two lectures, the first was by far the best, partly because the person who delivered it had such a dynamic style.
   (A) (B) (C) (D)

2. That modern science knows to assist women who are unable to give birth to babies by normal means is one of the miracles of the twentieth century.
   (A) (B) (C) (D)

3. After he had researched his paper and wrote it he found some additional data that he should have included.
   (A) (B) (C) (D)

4. Because of the light, the city seemed differently from the way that I had remembered it.
   (A) (B) (C) (D)

5. The Federal Aviation Agency has grounded all DC-10 aircraft so they can be checked for possible problems in the design of the under-wing jet systems.
   (A) (B) (C) (D)

6. The colonel wanted to retreat, but the general insisted that he continue do everything necessary in order to win the battle.
   (A) (B) (C) (D)

7. There are not many people which adapt to a new culture without feeling some disorientation at first.
   (A) (B) (C) (D)

8. Bob wishes that his wife understands why he has not had time to write her lately.
   (A) (B) (C) (D)

9. Because of the accident, the judge forbade Joe and me from driving for six months.
   (A) (B) (C) (D)

10. After he had ran the program thought the computer, he noticed that he had forgotten to do the last operation.
    (A) (B) (C) (D)

11. Most small appliances have ninety-days guarantees that entitle the purchaser to free repair or replacement if the item breaks before the expiration date.
    (A) (B) (C) (D)
12. Although everyone in our group was pleased with his meal, Mrs. Brown insisted on complaining that the coffee tasted badly.  
(A) (B) (C) (D)

13. Let you and I agree to cancel that last shipment unless the company meets the conditions of our original contract.  
(A) (B) (C) (D)

14. His recommendation that the Air Force investigates the UFO sightings was approved by the commission and referred to the appropriate committee.  
(A) (B) (C) (D)

15. Although she seems to be very mature, Ann is much younger as the other girls in her class.  
(A) (B) (C) (D)

16. Nuclear power plants are still supported by the Society of Professional Engineers in spite the unfortunate accident at Three Mile Island.  
(A) (B) (C) (D)

17. Miss Smith returned home quite lately that night to find that someone had broken into her garage and stolen her car.  
(A) (B) (C) (D)

18. If Mary would have been more careful in proofreading her dissertation, she would not have had to get it typed again.  
(A) (B) (C) (D)

19. The more that she tried to remove the stain, the worst it looked.  
(A) (B) (C) (D)

20. The national television networks have been criticized for not showing much good movies during prime time.  
(A) (B) (C) (D)

21. This is the athlete whom everyone says will win the gold medal at the winter Olympic Games.  
(A) (B) (C) (D)

22. If you would have checked your answer sheet more carefully, you would have corrected these errors yourself.  
(A) (B) (C) (D)

23. It was her who suggested that he go to New York in order to get a direct flight.  
(A) (B) (C) (D)

24. We veterans often fail taking advantage of the scholarship programs at the university level.  
(A) (B) (C) (D)

25. It is necessary that the directors will sign all of the copies, not just the top one.  
(A) (B) (C) (D)
CHAPTER 4 PART TWO: STRUCTURE AND WRITTEN EXPRESSION

Exercise One: Problems With Verbs (Part 1)

1. (D) *That* is used before the subject *he* and the verb word *rest* in the clause after the verb *insists.*

2. (C) *Neither* is used before the auxiliary *does* followed by the subject *she.* *She doesn’t either* would also be correct.

3. (A) *Hadn’t* and the participle *had are used* after the verb *wish* in the main clause.

4. (D) *Wouldn’t* is used before the subject *you* and the verb *like* in an invitation.

5. (B) *Do not* is used before the verb word *submit* to express a negative command.

6. (C) *Am* is used before the verb phrase *used to* followed by the –*ing* for *eating* to express habit.

7. (A) *Had* is used before the person *them* followed by the verb word *practice* to express an activity caused by *the coach.*

8. (B) The –*ing* form *answering* is used after the verb phrase *not mind*.

9. (C) *Had better* is used before the verb word *reserve* to express advice.

10. (C) *Weren’t* is used after *if* to express a condition contrary to fact.

11. (A) *Didn’t she* is used to agree with *you sister* and *used to visit* in the main clause.

12. (C) *Had* is used before the participle *come* in the conditional clause.

13. (B) *Would rather* is used before the subject *you* and the past verb *didn’t* followed by the verb word *do* to express preference.

14. (A) *Must have* is used before the participle *left* to express a logical conclusion.

15. (C) *Had* is used before the participle *rung* to refer to an activity *already* in the past.

Enter score on face sheet pages 135-137
Exercise Two: Problems With Verbs (Part 2)

1. (B) *That* is used before the subject *he* followed by *would* and the verb word *call* after the verb phrase *had hoped*.

2. (A) *Did* is used before the subject *I* to agree with *lived* in the main clause. *And I did too* would also be correct.

3. (B) *Know how* is used before the infinitive *to take* to express ability or skill. *Does your new secretary know shorthand* would also be correct.

4. (B) *Had* is used before the person *his big brother* followed by the verb word *tie* to express an activity caused by *Tommy*.

5. (C) *Were* is used after the verb *wish* in the main clause.

6. (A) The verb word *begin* is used in the clause after the verb *recommends*.

7. (C) *Shall we* is used to agree with *let’s* in the main clause.

8. (A) *Would [‘d] rather* is used before *not* and the verb word *have* to express preference.

9. (C) *Would you please* is used before *not* followed be the verb word *write* to express a negative command.

10. (D) *Was* is used before the verb phrase *used to* followed by the –ing form *sitting* to express a habit.

11. (D) *Were* is used after *if* to express a condition contrary to fact.

12. (B) *Hadn’t* is used before the participle *had* in the conditional clause.

13. (A) *Hasn’t he* is used to agree with *he’s [he has]* in the main clause.

14. (D) The –ing form *seeing* is used after the verb phrase *looking forward to*.

15. (A) The verb word *be* is used in the clause after the impersonal expression *it is imperative*.

Enter score on face sheet pages 135-137
Exercise Three: Problems With Verbs (Part 3)

1. (D) *Need* is used before the *-ing* form *adjusting* to express necessity for repair. *The brakes need to be adjusted* would also be correct.

2. (A) *Could* is used before the verb word *go* after the verb *wish* in the main clause.

3. (C) *Knows how* is used before the infinitive to use to express ability of skill. *Miss Smith knows the equipment* would also be correct.

4. (D) *Used to* is used before the verb word *go* to express a habit in the past.

5. (C) *Must have* is used before the participle *understood* to express a logical conclusion.

6. (C) *Wouldn’t* is used before the subject *you* followed by *rather* and the verb word *sit* to express preference.

7. (D) *That* is used before the subject *he* and the verb word *stay* in the clause after the verb *insisted*.

8. (B) The participle *written* is used after *had* to refer to an activity in the past.

9. (B) *Neither* is used before the auxiliary *would* followed by the subject *the other driver*. *The other driver wouldn’t either* would also be correct.

10. (B) *Doesn’t* is used in the clause of condition to agree with *we’ll [we will]* in the clause of result.

11. (D) *Have* is used before the thing your *temperature* followed by the participle *taken* to express an activity caused by someone else.

12. (C) The infinitive *to pass* is used after the verb *fails*.

13. (C) That is used before the subject she followed by would and the verb word *answer* after the verb phrase had hoped.

14. (C) The verb word *starts* is used after the verb phrase *had better* and the *-ing* form *getting up* is used after the verb *start*.

15. (D) *Is it* is used to agree with the subject *today’s* weather and the verb is in the main clause.

Enter score on face sheet pages 135-137
Exercise Fourteen: Problems With Introductory Verbal Modifiers

1. (A) An introductory verbal phrase followed by a comma should immediately precede the noun that it modifies. After finishing Roots is misplaced because is does not precede the noun it modifies, author Alex Haley.

2. (A) An introductory verbal phrase followed by a comma should immediately precede the noun that it modifies. A competitive sport is misplaced because it does not precede the noun it modifies, gymnastics.

3. (B) An introductory verbal phrase followed by a comma should immediately precede the noun that it modifies. Carefully soaking should be (you) carefully soak to provide a noun for the introductory verbal phrase to remove stains from permanent press clothing.

4. (A) An introductory verbal phrase followed by a comma should immediately precede the noun that it modifies. Found in Tanzania by Mark Leakey is misplaced because it does not precede the noun it modifies, the three-million-year-old fossils.

5. (A) An introductory verbal phrase followed by a comma should immediately precede the noun that it modifies. After fighting the blaze for three days is misplaced because it does not precede the noun it modifies, the fire fighters.

6. (B) An introductory verbal phrase followed by a comma should immediately precede the noun that it modifies. After finishing their degrees is misplaced because it does not precede the noun it modified, the students.

7. (D) An introductory verbal phrase followed by a comma should immediately precede the noun that it modifies. Columbus’s final resting place should be Columbus because the man, not the place, is modified by the verbal phrase Originally having been buried in Spain.

8. (B) An introductory verbal phrase followed by a comma should immediately precede the noun that it modifies. New York audiences received the new play should be the new play was received by New York audiences because the play, not the audiences, is modified by the verbal phrase written by Neil Simon.

9. (C) An introductory verbal phrase followed by a comma should immediately precede the noun that it modifies. Survival is assured should be animals assure survival because the animals, not the survival, is modified by the verbal phrase by migrating to a warmer climate every fall.

10. (B) An introductory verbal phrase followed by a comma should immediately precede the noun that it modifies. A memorial fund will be established should be family and friends will establish a memorial fund because the family and friends, not the memorial fund, are modified by the verbal phrase saddened by the actor’s sudden death.

11. (A) An introductory verbal phrase followed by a comma should immediately precede the noun that it modifies. Dental floss should be used should be (you) use dental floss to provide a noun for the introductory verbal phrase to prevent cavities.
12. (A) An introductory verbal phrase followed by a comma should immediately precede the noun that it modifies. *The Senate committee’s discovery* should be *The Senate committee discovered* because the committee, not the discovery, is modified by the verbal phrase *while researching the program of violent crime*.

13. (A) An introductory verbal phrase followed by a comma should immediately precede the noun that it modifies. *Trying to pay for a purchase with cash* is misplaced because it does not precede the noun it modifies, *customers*.

14. (A) An introductory verbal phrase followed by a comma should immediately precede the noun that it modifies. *After reviewing the curriculum* is misplaced because it does not precede the noun it modifies, *faculty*.

15. (D) An introductory verbal phrase followed by a comma should immediately precede the noun that it modifies. *Hank Aaron’s record* should be *Hank Aaron* because the man, not the record, is modified by the verbal phrase *having hit more home runs than any other player in the history of baseball*.

16. (A) An introductory verbal phrase followed by a comma should immediately precede the noun that it modifies. *Banned in the U.S.* is misplaced because it does not precede the noun it modifies, *fluorocarbons*.

17. (A) An introductory verbal phrase followed by a comma should immediately precede the noun that it modifies. *To avoid jet lag* is misplaced because it does not precede the noun it modifies, *patients*.

18. (A) An introductory verbal phrase followed by a comma should immediately precede the noun that it modifies. *After cooking in the microwave oven for five minutes* is misplaced because it does not precede the noun it modifies, *most meat dishes*.

19. (B) An introductory verbal phrase followed by a comma should immediately precede the noun that it modifies. *Traditionally named for women* is misplaced because it does not precede the noun it modifies, *a hurricane*.

20. (A) An introductory verbal phrase followed by a comma should immediately precede the noun that it modifies. *While testifying* is misplaced because it does not precede the noun it modifies, *witnesses*.

21. (A) An introductory verbal phrase followed by a comma should immediately precede the noun that it modifies. *By reading the instructions carefully* is misplaced because it does not precede the noun it modified.

22. (B) An introductory verbal phrase followed by a comma should immediately precede the noun that it modifies. *Her credit* should be *the woman* because she, not the credit, is modified by the phrase, *having been divorced*.

23. (A) An introductory verbal phrase followed by a comma should immediately precede the noun that it modifies. *Attempting to smuggle drugs into the country* is misplaced because it does not precede the noun it modifies, *criminals*.

24. (A) An introductory verbal phrase followed by a comma should immediately precede the noun that it modifies. *While trying to build a tunnel through the Blue Ridge Mountains* is misplaced because it does not precede the noun it modifies.

25. (A) An introductory verbal phrase followed by a comma should immediately precede the noun that it modifies. *Founded in 1919* is misplaced because it does not precede the noun it modifies, *the Institute for International Education*.
Exercise Fifteen: Problems With Parallel Structure

1. (D) Ideas in a series should be expressed by parallel structures. That it would adjourn should be to adjourn to provide parallelism with the infinitives to cancel and to approve.

2. (D) Ideas in a series should be expressed by parallel structures. It is should be deleted to provide parallelism among the adjectives fast, safe, and convenient.

3. (B) Ideas in a series should be expressed by parallel structures. Not only popular should be popular not only to provide parallelism between the adverbial phrases in the United States and abroad.

4. (B) Ideas in a series should be expressed by parallel structures. Tuning should be turn to provide parallelism with the verb words lock and walk.

5. (A) Ideas in a series should be expressed by parallel structures. Making should be to make to provide parallelism with

6. (C) Ideas in a series should be expressed by parallel structures. To modify should be to make to provide parallelism with the phrase by changing.

7. (C) Ideas in a series should be expressed by parallel structures. Awareness should be aware to provide parallelism with the adjectives intelligent and capable.

8. (B) Ideas in a series should be expressed by parallel structures, and inclusives should be used in coordinating pairs. But should be but also to coordinate with not only.

9. (D) Ideas in a series should be expressed by parallel structures. Signing your name should be the signature to provide parallelism with the nouns the address, the inside address, the salutation, the body, and the closing.

10. (B) Ideas in a series should be expressed by parallel structures. To do should be by doing to provide parallelism with the phrase by using.

11. (A) Ideas in a series should be expressed by parallel structures. Being introduced should be to be introduced to provide parallelism with the infinitive to read.

12. (C) Ideas in a series should be expressed by parallel structures. And not should be nor to coordinate with neither.

13. (C) Ideas in a series should be expressed by parallel structures. Who should be deleted to provide parallelism among the verbs understands, knows, and works.

14. (A) Ideas in a series should be expressed by parallel structures. Ice skating should be to go ice skating to provide parallelism with the infinitive to go skiing.

15. (D) Ideas in a series should be expressed by parallel structures. The operation was begun should be began the operation to provide parallelism with the past, active verb examined.
16. (B) Ideas in a series should be expressed by parallel structures. *Because of the time* should be *because there was little time* to provide parallelism with the clause *because we were not sure*.

17. (C) Ideas in a series should be expressed by parallel structures. *Avoiding* should be *avoid* to provide parallelism with the verb words *drink* and *eat*.

18. (B) Ideas after inclusives should be expressed by parallel structures. *A key* should be *with a key* to provide parallelism with the phrase *with an element*.

19. (C) Ideas in a series should be expressed by parallel structures. *Warning* should be *to warn* to provide parallelism with the infinitive *to report*.

20. (D) Ideas in a series should be expressed by parallel structures. *Had finished* should be *finishing* to provide parallelism with the –ing forms *traveling* and *visiting*.

21. (D) Ideas in a series should be expressed by parallel structures. *There are* should be deleted to provide parallelism among the nouns *the flag, the airplane, and the gowns*.

22. (D) Ideas in a series should be expressed by parallel structures. *Less* should be *least* to provide parallelism with the superlative adjectives the *smallest* and *most recently published*.

23. (D) Ideas after inclusives should be expressed by parallel structures. *The House of Representatives* should be *by the House of Representatives* to provide parallelism with the phrase *by the Sentate*.

24. (D) Ideas in a series should be expressed by parallel structures. *With ease* should be *easily* to provide parallelism with the adverbs *safely* and *efficiently*.

25. (C) Ideas after exclusives should be expressed by parallel structures and exclusives should be used in coordinating pairs. But *also* should be *but* to coordinate with *not*.

Enter score on face sheet pages 135-137
Exercise Eighteen: Problems With Structure

1. (B) *The best* should be *the better* because two, not three lectures, are being compared.

2. (A) *Knows to assist* should be *knows how to assist* because knows how is used before the infinitive *to assist*.

3. (A) *Wrote* should be *written* because a participle, not a past form, is used with *had*.

4. (B) *Differently* should be *different* because an adjective, not an adverb, is used after the verb of the senses the *seem*.

5. (C) *So* should be *so that* because it introduces a clause of purpose,

6. (C) *Do* should be *doing* because an –ing form, not a verb word, is used after the verb *continue*.

7. (C) *Which* should be *who* because it refers to people, not things.

8. (A) *Understands* should be *understood* because a past form, not a present form, is used after the verb *wishes*.

9. (B) *From* should be deleted because a preposition is not used after the verb *forbid*.

10. (A) *Ran* should be *run* because a participle, not a past form, is used with *had*.

11. (B) *Ninety-days* should be *ninety-day* because an adjective does not have a plural form.

12. (D) *Badly* should be *bad* because an adjective, not an adverb, is used after the verb of the senses *taste*.

13. (A) *I* should be *me* because an objective pronoun is used after *let*.

14. (A) *Investigates* should be *investigate* because the word *recommendation* requires a verb word.

15. (C) *As* should be *than* because *than* is used after the comparative *younger*.

16. (C) *In spite* should be *in spite of* because *in spite of* introduces a condition with an unexpected result. *Despite* would also be correct.

17. (A) *Lately* should be *late* because the adverb form of *late* does not have an –ly ending.

18. (A) *Would have been* should be *had been* because *had* and a participle are used in the condition and *would have* and a participle are used in the result.

19. (C) *The worst* should be *the worse* because comparative forms are used with the in double comparisons that express cause and result.
20. (C) *Much* should be *many* because many is used with the count noun *movies*.

21. (B) *Whom* should be *who* because it is the subject of the verb *will win*.

22. (A) *Would have checked* should be *had checked* because *had* and a participle are used in the condition and *would have* and a participle are used in the result.

23. (A) *Her* should be *she* because a subject pronoun is used after *it was*

24. (B) *Taking* should be *to take* because an infinitive, not an –*ing* form, is used after the verb *fail*.

25. (A) *Will sign* should be *sign* because a verb word is used after the impersonal expression *is it necessary*.

Enter score on face sheet pages 135-137
Lesson 5

Sentence Structure
Dangling Modifiers

Dangling modifiers create a sentence that lacks an appropriate subject.

Looking down at the valley, the colors were beautiful.
   \textit{Dangling modifier}

Who is looking at the valley? In this sentence, the phrase \textit{Looking down at the valley}, modifies \textit{colors}. Since colors cannot look at a valley, the writer must create an appropriate subject.
Looking down at the valley, we saw that the colors were beautiful.
   \textit{(Corrected Sentence)}

To fix a dangling modifier, create a logical subject for the modifier

Walking to the office, the police car pulled over the red truck
Walking to the office, I saw the police car pull over the red truck.
   \textit{(Corrected by creating a subject)}
While I was walking to the office, I saw the police car pull over the red truck.

5 QUESTIONS
Dangling Modifiers

Directions: Choose the one best answer to each question. Questions 1 through 6 refer to the following paragraph.

(1) Comets are icy, celestial bodies that have one or two tails. (2) We can see comets without a high-power telescope only when they orbit very near the sun. (3) The sun melts the ice, creating a vapor trail of shining dust particles. (4) We watch their swift, brilliant journeys, knowing they are very far away. (5) With dazzling tails behind them, we are astonished by their beauty. (6) Looking up into the night sky, the unusual light show is awesome.

1. Sentence 2: We can see comets without a high-power telescope only when they orbit very near the sun.

If you rewrote sentence 2 beginning with: Without a high-power telescope, the next words should be:
(1) We can see
(2) We can see
(3) Comets orbits
(4) When they orbit
(5) Very near the sun

2. Sentence 4: We watch their swift, brilliant journeys, knowing they are very far away.

If you rewrote sentence 4 beginning with: Knowing they are very far away the next words should be:
(1) Comets are
(2) We can see
(3) We had watched
(4) Their swift, brilliant journeys
(5) There swift, brilliant journeys

3. Sentence 5: With dazzling tails behind them, we are astonished by their beauty.

Which is the best way to write the underlined portion of this sentence? If the original is the best way, choose option (1).
(1) We are astonished by their beauty.
(2) We are astonished by comets by their beauty.
(3) We are astonishing by their beauty.
(4) Comets are astonished by their beauty.
(5) Comets astonish us by their beauty.
4. Sentence 6: Looking up into the night sky, the unusual light show is awesome.

Which correction should be made to sentence 6?
(1) Remove the comma after sky
(2) Insert you see after sky,
(3) Insert we all agree that after sky,
(4) Insert a comma after show
(5) No correction is necessary

5. Looking for an adventure, a windjammer cruise can be exciting and fun.

Which is the best way to write the underlined portion of this sentence? If the original is the best way choose option (1)
(1) Adventure, a windjammer
(2) Adventure; a windjammer
(3) Adventure, we found that a windjammer
(4) Adventure, exciting and fun
Lesson 6

Sentence Structure
Parallel Structure

Parallel structure means that equal and related words and phrases must use the same grammatical form.

¾ Verbs, nouns, adjectives, or adverbs in a series must use the same grammatical form.

She is happy, charming, and has beauty. (Has beauty is not parallel with the adjectives happy and charming.)
She is happy, charming, and beautiful. (correct)
The as shows the desk’s size, color, and how much it costs. (How much it costs is not parallel with the nouns size and color.)

¾ Phrases in a series must use the same grammatical form.

She makes quilts for relaxation, entertainment, and to earn extra money.
(To earn extra money is not parallel with the nouns relaxation and entertainment.)
She makes quilts for relaxation, entertainment, and extra money. (correct)
Directions: Choose the one best answer to each question. Questions 1 through 3 refer to the following paragraph.

(1) The tall Afghan hound are an ancient dog breed. (2) the Afghan, which has a curling tail, is long-eared, and has long legs. (3) The Afghan also has thick, long flowing hair. (4) Afghans are aloof, are stubborn, and have a sweet disposition. (5) For such a large and stately dog the Afghan is surprisingly affectionate. (6) Afghans like to hunt, to run, and being by themselves outside.

1. Sentence 2: The Afghan, which has a curling tail, is long-eared, and has long legs.

If you rewrote sentence 2 beginning with; With a curling tail, long ears, and the next word should be:

(1) Its long legs,
(2) Has long legs
(3) Legs that are long,
(4) Runs on long legs
(5) Long legs,

2. Sentence 4: Afghans are aloof, are stubborn, and have a sweet disposition.

If you rewrote sentence 4 beginning with Afghans are aloof, stubborn, and the next word or words should be:

(1) Have a sweet disposition
(2) Sweet
(3) Sweetly
(4) Are sweet dispositioned
(5) With a sweet disposition

3. Sentence 6: Afghan like to hunt, to run, and being by themselves outside.

Which is the best way to write the underlined portion of this sentence? If the original is the best way, choose option (1).

(1) Being by themselves
(2) To be by themselves
(3) Want to be by themselves
(4) Are glad to be by themselves
(5) Be by themselves
Questions 4 through 6 refer to the following paragraph.

(1) In October, the states of Vermont and Maine have spectacular colors, crisp weather, and leaves that fall. (2) Although they are green in the spring, the leaves turn bright red, deep brown, and yellow that shines in the fall. (3) The lake or ocean water is blue, clear, and it sparkles. (4) For many years, tourists have travel long distances to see these sights. (5) Maine and Vermont have become a favorite destination for hikers, bicyclists, and people who take pictures. (6) Our visitors always enjoy the fresh country air and the beautiful colors of the New England landscape.

4. Sentence 1: In October, the states of Vermont and Maine have spectacular colors, crisp weather, and leaves that fall.

Which is the best way to write the underlined portion of this sentence? If the original is the best way choose option (1)

(1) Leaves that fall
(2) Leaves who fall
(3) Leaves are falling
(4) Falling leaves
(5) Leaves fall

6. Sentence 3: the lake or ocean water is blue, clear, and it sparkles.

Which correction should be made to sentence 3?

(1) Insert a comma after lake
(2) Change is to are
(3) Remove the comma after blue
(4) Change it sparkles to sparkling
(5) Change it sparkles to which sparkles

7. Sentence 5: Maine and Vermont have become a favorite destination for hikers, bicyclists, and people who take pictures.

Which correction should be made to sentence 5?

(1) Change have to had
(2) Remove the comma after hikers
(3) Insert a comma after people
(4) Replace people who take pictures with photographers
(5) No Corrections necessary
Lesson 5  Dangling Modifiers

1.  1
2.  2
3.  5
4.  3
5.  3

Lesson 6  Parallel Structure

1.  5
2.  2
3.  2
4.  4
6.  4
7.  4

Enter scores on face sheet page 137
Quiz Answers
Lessons 5 and 6

Lesson 5  Dangling Modifiers
1. 1
2. 2
3. 5
4. 3
5. 3

Lesson 6  Parallel Structure
1. 5
2. 2
3. 2
4. 4
5. 4
6. 4
7. 4

Enter scores on face sheet page 137
A plural noun names *more than one* person, place, thing, or idea:
Many *families* buy homes to save money on taxes.

There are rules for forming the plurals of nouns. Here are the three most basic rules:

1) The plural of most nouns is formed by adding *s*:
   *Car, cars; sale, sales; desk, desks*

2) The plural of nouns ending with *s, sh, ch, x, or z* is formed by adding *es*:
   *Brush, brushes; box, boxes*

3) The **plural of nouns that end with **y** after a consonant is formed by changing **y** to **i** and adding **es**:
   *Baby, babies; city, cities*

Note: The plural of nouns that end with **y** after a *vowel* is formed by adding **s**:
*Day, days; attorney, attorneys*

**DIRECTIONS:** If there is an incorrect plural form in the group of nouns, Circle it. The write the correct spelling on the line. If all of the plurals are correct, write “OK” on the line.

<table>
<thead>
<tr>
<th>Example:</th>
<th>ducks</th>
<th>wishes</th>
<th>catches</th>
<th><strong>crashes</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. eagles</td>
<td>thrushes</td>
<td>parrots</td>
<td>finches</td>
<td>crashes</td>
</tr>
<tr>
<td>2. delays</td>
<td>pennys</td>
<td>keys</td>
<td>stories</td>
<td></td>
</tr>
<tr>
<td>3. watches</td>
<td>bracelets</td>
<td>necklaces</td>
<td>crownes</td>
<td></td>
</tr>
<tr>
<td>4. buggies</td>
<td>candies</td>
<td>bluejays</td>
<td>blueberrys</td>
<td></td>
</tr>
<tr>
<td>5. riches</td>
<td>hopes</td>
<td>kisses</td>
<td>witchs</td>
<td></td>
</tr>
<tr>
<td>6. turkeys</td>
<td>studies</td>
<td>puppys</td>
<td>cavities</td>
<td></td>
</tr>
<tr>
<td>7. blazes</td>
<td>dashes</td>
<td>blotches</td>
<td>blanketes</td>
<td></td>
</tr>
<tr>
<td>8. secretarys</td>
<td>directories</td>
<td>mysteries</td>
<td>volley</td>
<td></td>
</tr>
</tbody>
</table>
Here are more rules for forming the plurals of nouns.

4) The plural of nouns ending with \( f \) or \( fe \) is sometimes formed by adding \( s \); sometimes it is formed by changing the \( f \) or \( fe \) to \( v \) and adding \( es \):
   - roof, roofs; thief, thieves; knife, knives

5) The plural of most nouns ending in \( o \) is formed by adding \( s \). Sometimes the same words can end either in \( s \) or \( es \); check your dictionary if you are not sure. The following words always end in \( es \):
   - tomato, tomatoes; potato, potatoes; echo, echoes; hero, heroes; torpedo, torpedoes

6) The plural of hyphenated nouns is formed by adding \( s \) to the main noun:
   - father-in-law, fathers-in-law; looker-on, lookers-on

7) The plural of nouns ending with \( ful \) is formed by adding \( s \) to the end of the word:
   - spoonful, spoonfuls

Directions: If there is an incorrect plural form in the group of nouns, circle it. Then write the correct spelling on the line. If all of the plurals are correct, write “OK” on the line.

Example: videos pianoes solos heroes

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>tomatoes</td>
<td>potatoes</td>
<td>tattoos</td>
<td>toes</td>
<td>pianos</td>
</tr>
<tr>
<td>2.</td>
<td>sisters-in-law</td>
<td>half-brothers</td>
<td>attorney’s-at-laws</td>
<td>masters-of-cere nonies</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>mouthfuls</td>
<td>bagsful</td>
<td>handfuls</td>
<td>drawerfuls</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>cousins-to-be</td>
<td>mothers-in-law</td>
<td>great-aunts</td>
<td>brother-in-laws</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>echoes</td>
<td>shelves</td>
<td>autos</td>
<td>wives</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>lives</td>
<td>bookshelves</td>
<td>knives</td>
<td>beliefs</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>altos</td>
<td>stereos</td>
<td>photos</td>
<td>radios</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>leafs</td>
<td>proofs</td>
<td>halves</td>
<td>calves</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>banjos</td>
<td>burros</td>
<td>cellos</td>
<td>sopranos</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>mosquitoes</td>
<td>hoboese</td>
<td>videos</td>
<td>potatos</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>briefs</td>
<td>pufis</td>
<td>tarifis</td>
<td>safes</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>cupsful</td>
<td>armfuls</td>
<td>bowlfuls</td>
<td>boxfuls</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>memos</td>
<td>cameos</td>
<td>studioes</td>
<td>duos</td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>lookers-on</td>
<td>runners-on</td>
<td>brides-to-be</td>
<td>senator-elects</td>
<td></td>
</tr>
</tbody>
</table>
Exercise 4  IRREGULAR PLURALS

Below are examples of plural nouns with different types of irregular spellings.

8) For some nouns, the plural form is the same as the singular form:
   - one fish, two fish; one deer, two deer

9) Some nouns can be used only in the plural form:
   - Binoculars; scissors

10) The plural of some nouns is formed by changing the spelling:
    - Tooth, teeth; mouse, mice; child, children; person, people

11) The plural of nouns ending with man, woman, or child is formed by using the plural forms men, women, or children

12) The plural of some nouns ending in is is formed by changing is to es:
    - crisis, crises; basis, bases; hypothesis, hypotheses

13) The plural of some nouns ending in um or on is formed by changing the um or on to a:
    - datum, data; memorandum, memoranda; criterion, criteria; phenomenon, phenomena

DIRECTIONS: If there is an incorrect plural form in the group of nouns, circle it. Then write the correct spelling on the line. If all of the plurals are correct, write “OK” on the line.

Example: teeth scissors memorandes parentheses memoranda

<table>
<thead>
<tr>
<th>1. mice</th>
<th>trout</th>
<th>fish</th>
<th>sheep</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. children</td>
<td>repairmen</td>
<td>crisies</td>
<td>hypotheses</td>
</tr>
<tr>
<td>3. sunglass</td>
<td>trousers</td>
<td>shorts</td>
<td>jeans</td>
</tr>
<tr>
<td>4. policemen</td>
<td>bases</td>
<td>feet</td>
<td>washerwomen</td>
</tr>
<tr>
<td>5. cattle</td>
<td>pants</td>
<td>data</td>
<td>tooths</td>
</tr>
<tr>
<td>6. clothes</td>
<td>slacks</td>
<td>overalls</td>
<td>briefs</td>
</tr>
<tr>
<td>7. servicewomen</td>
<td>lice</td>
<td>eyeglasses</td>
<td>moose</td>
</tr>
<tr>
<td>8. swordfish</td>
<td>deers</td>
<td>cows</td>
<td>horses</td>
</tr>
<tr>
<td>9. godchilds</td>
<td>godparents</td>
<td>chairwoman</td>
<td>chairmen</td>
</tr>
<tr>
<td>10. analyses</td>
<td>criterias</td>
<td>memoranda</td>
<td>media</td>
</tr>
</tbody>
</table>
Exercise 5  PLURALS REVIEW

DIRECTIONS: Write the plural form of each noun.

Example: handful

1. city
2. church
3. chairwoman
4. crisis
5. monkey
6. brother-in-law
7. baby
8. tooth
9. belief
10. solo
11. check
12. potato
13. wife
14. story
15. light
16. replay
17. spoonful
18. fish
19. bookshelf
20. grandchild
21. vacancy
22. crash
23. annex
24. quiz
25. criterion

handfuls
Exercise 12  PAST TENSE IRREGULAR VERBS

As you have seen, the past tense of most verbs is formed in a regular manner, by adding *ed*:

*Look, looked; pick, picked; rain, rained; jump, jumped*

Some verbs, called irregular verbs, form the past tense differently:

*Bring, brought; eat, ate; come, came; sing, sang*

To be certain of the correct past tense form of any irregular verb, you can check the dictionary.

**DIRECTIONS:** Underline the correct past tense verb in each sentence.

**Example:** *No one (weared, wore) a warm jacket.*

1. Ryan (threwed, threw) the ball to the plate.
2. I (wrote, writ) a seven-page letter to Carlos.
3. When it got dark, we all (ran, run) home.
4. Gilda (slept, sleeped) until past noon.
5. The mail workers (striked, struck) for higher pay.
6. Yesterday, Diana Nyad (swam, swum) across the bay.
7. Lou (caught, caught) a cold on his camping trip.
8. The bird (flew, flied) over the rainbow.
9. Someone just (stoled, stole) a car from the parking lot.
10. The crowd (been, was) at the race since early afternoon.
11. The announcer (sayed, said) the show would go on.
12. Leonard and Doris (loosed, lost) everything in the fire.
13. I really (feeled, felt) awful about their bad luck.
14. Everyone (saw, seen) the fireworks.
15. Ms. Johnson (teached, taught) math for twenty years.
Exercise 13  ALL TENS

Besides the simple present, past, and future, there are other, more complicated, tenses a verb can take.

In addition, on verb form—the infinitive—does not reflect different verb tenses. As its name implies, the infinitive is “timeless”:

We like to go there. We wanted to go there last night. We plan to go there tomorrow.

DIRECTIONS: Before each sentence below, the base form of the verb is written in parentheses. Decide on the correct form of the verb needed to fill in the blank in the sentences. Write the correct verb form in the blank.

Example: (bring) Has Lu __brought____ her boys to the class?

1. (eat) Have you _______________ yet?
2. (see) Everyone had _______________ the movie.
3. (go) When will you _____________ to Washington?
4. (write) Davida decided _______________ a letter to her boyfriend yesterday.
5. (write) Have you _______________ down your Social Security number?
6. (get) A minute ago Mark _______________ a flashlight so we could see.
7. (feel) I’ve never _______________ so sick before.
8. (speak) Has the main character _______________ yet?
9. (hurt) Ms. Miller just _______________ herself on the rough edges of the desk.
10. (hear) We haven’t _______________ from the unemployment office.
11. (get) Has Khalil been able _______________ his raise yet?
12. (break) How could the new car have _______________ down already?
13. (sleep) Barry _______________ on the sofa in the living room last night.
14. (leave) When my family _______________, I felt very lonely.
15. (freeze) The Popsicles haven’t _______________ yet.
16. (do) What are you _______________?
17. (drink) A baby will usually _______________ a bottle a formula every four hours.

(continued)
18. (sweep) Don __________ the floor before his in-laws arrived.
19. (know) If I had __________ how late it was, I’d have stayed at home.
20. (think) Freddi promises she will __________ about our offer.
21. (do) Has Felipe __________ the project?
22. (buy) Although we had just __________ the drapes, they looked so awful we returned them.
23. (answer) The operator is __________ your call now.
24. (go) When you __________ to school, how large were your classes?
25. (sing) Verna and Mike have __________ in the choir for years.
26. (eat) I __________ the liver sausage pizza, and it was revolting.
27. (sit) I __________ so long that I was stiff.
28. (order) As soon as the waiter comes, we should __________.
29. (take) The plane will be __________ off on time this morning.
30. (try) We are __________ to save money, but it’s very difficult.
31. (depend) You had better not __________ the teacher for getting good grades, It’s mostly up to you.
Answer Key

EXERCISE 1
1. 2 5. 1
2. 2 6. 3
3. 3 7. 5
4. 1 8. 4

EXERCISE 2
1. OK
2. pennies
3. crowns
4. blueberries
5. OK
6. bushes
7. blankets
8. secretaries

EXERCISE 3
1. tomatoes
2. attorneys-at-law
3. bagfuls
4. brothers-in-law
5. OK
6. knives
7. photos
8. leaves
9. OK
10. potatoes
11. OK
12. cupfuls
13. studios
14. senators-elect

EXERCISE 4
1. OK
2. crises
3. sunglasses
4. policemen
5. teeth
6. OK
7. servicewomen
8. deer
9. godchildren
10. criteria

EXERCISE 5
1. cities
2. churches
3. chairwomen
4. crises
5. monkeys
6. brothers-in-law
7. babies
8. teeth
9. beliefs
10. soles
11. checks
12. potatoes
13. wives
14. stories
15. lights
16. replays
17. spoonfuls
18. fish
19. bookshelves
20. grandchildren
21. vacancies
22. crashes
23. annexes
24. quizzles
25. criteria

EXERCISE 6
1. OK
2. bus’s
3. landlord’s
4. miners’
5. weeks’
6. OK
7. protesters’
8. Jones’s
9. parents’
10. OK
11. workers’
12. Gross’s
13. OK
14. today’s
15. Boys’

EXERCISE 7
1. Jose’s
2. David’s
3. OK
4. people’s
5. OK
6. women’s
7. Steven’s
8. OK
9. Sally’s
10. OK

EXERCISE 8
1. fewer
2. These
3. OK
4. less
5. OK
6. advice
7. many
8. deal

EXERCISE 9
1. 1 6. 3
2. 1 7. 1
3. 5 8. 1
4. 3 9. 2
5. 1 10. 4

EXERCISE 10
1. stirred
2. is
3. reported
4. slips, will break
5. will decide
6. left, was
7. is
8. give
9. dimmed, booed
10. pour, cause
11. saw, hit
12. slams, jumps
13. baked, were
14. spread
15. write
16. am
17. thinks
18. finish, take

Enter Score on face sheets pages 135-137
EXERCISE 11
1. rained 5. dried
2. carried 6. OK
3. OK 7. scrubbed
4. employed 8. committed

EXERCISE 12
1. threw 9. stole
2. wrote 10. was
3. ran 11. said
4. slept 12. lost
5. struck 13. felt
6. swam 14. saw
7. caught 15. taught
8. flew

EXERCISE 13
1. eaten
2. seen
3. go
4. to write
5. written
6. got
7. felt
8. spoken
9. hurt
10. heard
11. to get
12. broken
13. slept
14. left
15. frozen
16. doing
17. drink
18. swept
19. known
20. think
21. done
22. bought
23. answering
24. went
25. sung
26. ate
27. sat
28. order
29. taking
30. trying
31. depend on

EXERCISE 14
1. 2 9. 1
2. 1 10. 1
3. 2 11. 4
4. 3 12. 2
5. 5 13. 5
6. 3 14. 2
7. 4 15. 2
8. 3 16. 3

EXERCISE 15
1. Us
2. Our
3. your
4. mine
5. her
6. himself
7. yourself
8. me
9. I
10. you
11. themselves
12. ours
13. hers
14. We
15. us
16. him
17. themselves
18. theirs
19. her
20. He
21. him
22. they

EXERCISE 16
1. I
2. We, they
3. they
4. He
5. him
6. them
7. her
8. he
9. They, we
10. me
11. us
12. me

EXERCISE 17
1. Whom
2. Who
3. whom
4. who
5. whom
6. who
7. whom
8. whomever
9. whoever
10. whoever
11. whomever
12. whoever

EXERCISE 18
1. their 7. its
2. his 8. their
3. its 9. their
4. its 10. their
5. their 11. their
6. their 12. her

EXERCISE 19
1. stylish; adverb
2. flowers; adjective
3. blanket; adjective
4. cereal; adjective
5. scraped; adverb
6. peanuts; adjective
7. crept; adverb
8. come; adverb
9. go; adverb
10. movies; adjective
11. finished; adverb
12. water; adjective
13. person; adjective
14. sorry; adverb
15. frightened; adverb

Enter Score on face sheets pages 135-137
Lesson 12

Usage
Subject-Verb Agreement

¾ The subject and verb in a sentence must agree in number. If the subject is singular, the verb must be singular. Likewise, if the subject is plural, the verb must be plural.
   My computer is not working. (singular subject and verb)
   Our computers are not working. (plural subject and verb)

¾ A Compound subject joined by and is plural. It requires a plural verb.
   The fax machine and the copier are being repaired.

¾ Singular compound subjects joined by or or nor require a singular verb.
   Either the fax machine or the copier is being repaired.

¾ When a singular and plural subject are joined by or or nor, the verb agrees with the closest subject.
   Neither the fax machine nor the copiers are working.
   Neither the copiers nor the fax machine is working.
Directions: Choose the one best answer to each question. Questions 1 through 5 refer to the following paragraph.

(1) Neither drinking nor sleeping mixes with driving. (2) Some experts view being sleepy behind the wheel like being intoxicated. (3) Driving at night or driving when you’re tired increase the likelihood of an accident. (4) There have been some common danger signs that you are about to fall asleep while driving. (5) Yawning, nodding, and seeing double are three signs of fatigue. (6) Drifting off the road and then jerking the car back into the lane also means you are in danger.

1. Sentence 2: Some experts view being sleepy behind the wheel like being intoxicated.

If you rewrote sentence 2 beginning with For some experts, being sleepy behind the wheel
The next word should be

(1) views (2) is (3) are (4) was (5) being

2. Sentence 3: Driving at night or driving when you’re tired increase the likelihood of an accident.

Which correction should be made to sentence 3?

(1) insert a comma after night (2) replace you’re with your (3) insert a comma after tired (4) change increase to increases (5) no correction is necessary

3. Sentence 4: There have been some common danger signs that you are about to fall asleep while driving.

Which is the best way to write the underlined portion of this sentence? If the original is the best way, choose option (1).

(1) There have been some common danger signs (2) Their have been some common danger signs (3) There have been some common danger signs, (4) There are some common danger signs (5) There were some common danger signs

4. Sentence 5: Yawning, nodding, and seeing double are three signs of fatigue.

Which correction should be made to sentence 5?

(1) remove the comma after Yawning (2) replace and with or (3) change are to is (4) change are to will be (5) no correction is necessary

5. Sentence 6: Drifting off the road and then jerking the car back into the lane also means you are in danger.

Which correction should be made to sentence 6?

(1) replace road with rode (2) insert a comma after lane (3) change means to mean (4) change are to was (5) no correction is necessary

Tip: A plural verb does not end in -s. If the subject of a sentence is plural and the verb ends in -s, you know that the subject and verb don’t agree. You must correct the sentence.
For Questions 6 though 10 refer to the following paragraph.

(1) In 1755 a group of French settlers were expelled from their adopted homeland. (2) They settle earlier in what is now the Canadian province of Nova Scotia. (3) They called the coastal area where they lived Acadia.
(4) However the settlers became victims of the struggle between France and England for control of North America. (5) They scattered throughout the British colonies form Massachusetts to Louisiana.
(6) The group that settled in Louisiana came to be known as “Cajuns,” a word derived from “Acadians.” (7) Henry Wadsworth Longfellow’s famous narrative poem “Evangeline” is about the French settlers transplanted to Louisiana.

6. Sentence 2: They settle earlier in what is now the Canadian province of Nova Scotia.

Which correction should be made to sentence 2?

(1) change settle to had settled
(2) change is to was
(3) change is to will be
(4) insert a comma after province
(5) no correction is necessary

7. Sentence 3: They called the coastal area where they lives Acadia.

If you rewrote sentence 3 beginning with Acadia was the name they the next word(s) should be

(1) had called
(2) call
(3) will call
(4) give
(5) called

8. Sentence 4: However the settlers became victims of the struggle between France and England for control of North America.

Which correction should be made to sentence 4?

(1) insert a comma after However
(2) change became to become
(3) change became to will become
(4) insert a comma after France
(5) insert a comma after England

9. Sentence 6: The Group that settled in Louisiana came to be known as “Cajuns,” a word derived from “Acadians.”

Which is the best way to write the underlined portion of this sentence? If the original is the best way, choose option (1).

(1) settled in Louisiana came to be known as “Cajuns,”
(2) will settle in Louisiana came to be knows as “Cajuns,”
(3) settled in Louisiana come to be known as “Cajuns,”
(4) settled, in Louisiana, will come to be known as “Cajuns,”
(5) settle in Louisiana came to be knows as “Cajuns,”

10. Sentence 7: Henry Wadsworth Longfellow’s famous narrative poem “Evangeline” is about the French settlers transplanted to Louisiana.

Which correction should be made to sentence 7?

(1) change Longfellows to Longfellow’s
(2) insert a comma after Longfellow’s
(3) insert a comma after famous
(4) change is to has been
(5) change is to will be
**SUBJECT-VERB AGREEMENT**

*Exercise 19*

**DIRECTIONS:** Block out box A if the sentence is correct. Block out box B if the sentence is incorrect.

1. One of the students have my homework.  
   ![ ]  ![ ]

2. Are any of you going to see the game today?  
   ![ ]  ![ ]

3. One-fourth of the crew was injured in that game.  
   ![ ]  ![ ]

4. One-fourth of the members are ready to vote now.  
   ![ ]  ![ ]

5. Any one of the four is a good as these.  
   ![ ]  ![ ]

6. A box of oranges were received at the depot early this morning.  
   ![ ]  ![ ]

7. Neither you nor he is responsible for my errors.  
   ![ ]  ![ ]

8. Either of the men know the combination to the safe.  
   ![ ]  ![ ]

9. She is one of the girls who is to speak at the rally.  
   ![ ]  ![ ]

10. Every one of the solutions were rejected by the judges.  
    ![ ]  ![ ]

11. Either this group or several of those was the object of his search.  
    ![ ]  ![ ]

12. Pauline together with her four friends wish to see you immediately.  
    ![ ]  ![ ]

13. The carton of old magazines were placed in the basement.  
    ![ ]  ![ ]

14. Everyone except the members of the laboratory squad see this as a major problem.  
    ![ ]  ![ ]

15. Milton and Jerome without the aid of anyone of their friends has solved the problem within the time limits set by the rules.  
    ![ ]  ![ ]

16. There is only one set of rules that I ever follow.  
    ![ ]  ![ ]

17. Here are the set of records that he bought for me.  
    ![ ]  ![ ]

18. Each of the boys who sell newspapers has to have an identification badge.  
    ![ ]  ![ ]

19. Why don’t someone fix the switch for the electric trains?  
    ![ ]  ![ ]

20. Why don’t he mind his own business!  
    ![ ]  ![ ]

21. Edna accompanied by Margie and her friend has left for the station.  
    ![ ]  ![ ]

22. No longer do his incessant cries for assistance bother his calloused guards.  
    ![ ]  ![ ]

23. Neither the time nor the energy is his at this moment.  
    ![ ]  ![ ]

24. Each of the contestants have three minutes to work out the puzzle.  
    ![ ]  ![ ]

25. Are there anyone of the players ready to join me in a practice session?  
    ![ ]  ![ ]
Answer Key

Lesson 1 (pages 4-5)
1. (4) 6. (4)
2. (5) 7. (4)
3. (4) 8. (1)
4. (1) 9. (5)
5. (1) 10. (4)

Lesson 2 (pages 7-8)
1. (1) 6. (2)
2. (4) 7. (3)
3. (5) 8. (1)
4. (2) 9. (3)
5. (1) 10. (4)

Lesson 3 (pages 10-11)
1. (1) 6. (3)
2. (1) 7. (3)
3. (5) 8. (1)
4. (3) 9. (4)
5. (4) 10. (4)

Lesson 4 (pages 13-14)
1. (3) 6. (3)
2. (5) 7. (1)
3. (4) 8. (4)
4. (3) 9. (5)
5. (4) 10. (2)

Lesson 5 (pages 16-17)
1. (2) 6. (2)
2. (4) 7. (3)
3. (3) 8. (1)
4. (5) 9. (4)
5. (5) 10. (5)

Lesson 6 (pages 19-20)
1. (5) 6. (2)
2. (2) 7. (5)
3. (3) 8. (4)
4. (2) 9. (2)
5. (3) 10. (4)

Lesson 7 (pages 22-23)
1. (5) 6. (3)
2. (1) 7. (3)
3. (1) 8. (3)
4. (4) 9. (3)
5. (5) 10. (2)

Lesson 8 (pages 25-26)
1. (2) 6. (1)
2. (5) 7. (2)
3. (2) 8. (5)
4. (2) 9. (4)
5. (1) 10. (4)

Lesson 9 (pages 28-29)
1. (3) 6. (3)
2. (2) 7. (2)
3. (5) 8. (5)
4. (4) 9. (3)
5. (1) 10. (1)

Lesson 10 (pages 31-32)
1. (4) 6. (4)
2. (5) 7. (4)
3. (4) 8. (1)
4. (1) 9. (5)
5. (1) 10. (4)

Lesson 11 (pages 34-35)
1. (4) 6. (3)
2. (2) 7. (1)
3. (1) 8. (3)
4. (3) 9. (4)
5. (4) 10. (5)

Lesson 12 (pages 37-38)
1. (2) 6. (1)
2. (4) 7. (5)
3. (4) 8. (1)
4. (5) 9. (1)
5. (3) 10. (1)

Lesson 13 (pages 40-41)
1. (3) 6. (5)
2. (5) 7. (3)
3. (5) 8. (1)
4. (1) 9. (2)
5. (2) 10. (5)

Lesson 14 (pages 43-44)
1. (5) 6. (4)
2. (3) 7. (5)
3. (2) 8. (4)
4. (4) 9. (3)
5. (2) 10. (2)

Lesson 15 (pages 46-47)
1. (1) 6. (3)
2. (4) 7. (1)
3. (5) 8. (4)
4. (1) 9. (4)
5. (5) 10. (2)

Enter Score on face sheets pages 135-137
Answer Key

Exercise 19

1. b
2. b
3. a
4. a
5. a
6. b
7. a
8. b
9. b
10. b
11. b
12. b
13. b
14. b
15. b
16. a
17. b
18. a
19. b
20. b
21. a
22. a
23. a
24. b
25. b

Enter Score on face sheets pages 135-137
Gerunds and Infinitives

Directions: Put G for verbs followed only by gerunds, I for verbs followed only by infinitives.

G or I

1. refuse ________ 46. recall ________
2. delay ________ 47. hire ________
3. volunteer ________ 48. appear ________
4. beg ________ 49. practice ________
5. appreciate ________ 50. remind ________
6. mind ________
7. can’t help ________
8. persuade ________
9. keep ________
10. miss ________
11. force ________
12. afford ________
13. challenge ________
14. discuss ________
15. imagine ________
16. dare ________
17. arrange ________
18. allow ________
19. pretend ________
20. resent ________
21. convince ________
22. tell ________
23. authorize ________
24. manage ________
25. teach ________
26. mention ________
27. postpone ________
28. mean ________
29. agree ________
30. cause ________
31. anticipate ________
32. struggle ________
33. warn ________
34. avoid ________
35. deny ________
36. dislike ________
37. resist ________
38. demand ________
39. risk ________
40. deserve ________
41. urge ________
42. suggest ________
43. quit ________
44. expect ________
45. recommend ________

Gerund = verb + ing  Ex: delay going  V + ing

Infinitive = to + verb  Ex: decide to go  To + V
Quiz Answers
G or I

1. I (refuse to go)  
2. G (delay going)  
3. I  
4. I  
5. G  
6. G  
7. G  
8. I  
9. G  
10. G  
11. I  
12. I  
13. I  
14. G  
15. G  
16. I  
17. I  
18. I  
19. I  
20. G  
21. I  
22. I  
23. I  
24. I  
25. I  
26. G  
27. G  
28. I  
29. I  
30. I  
31. G  
32. I  
33. I  
34. G  
35. G  
36. G  
37. G  
38. I  
39. G  
40. I  
41. I  
42. G  
43. G  
44. I  
45. G  
46. G  
47. I  
48. I  
49. G  
50. I