# Unit 1   Practice Problems

1) List the ten digits in increasing order.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

2) Arrange the following in decreasing (high to low) order.  Be sure to place any commas in the proper location.

1002 _____

99500 _____

98 _____

910465 _____

991 _____

9991 _____

3) Write the numbers described below in the spaces provided.

A. one thousand six hundred twenty

_____

B. three hundred thousand

_____

C. eight hundred six

_____

4) Multiply 48 by 10, by 100, and by 1,000.

A. _____        B. _____        C. _____

5) Write the numbers described below in the spaces provided.

| one thousand | one trillion | one hundred thousand |
|---|---|---|
| _____ | _____ | _____ |
| one billion | one million | ten thousand |
| _____ | _____ | _____ |

# Unit 2   Practice Problems

Use words to describe the following numbers.

1)   564

_____

2)   14,065

_____

_____

3)   1,609,280

_____

_____

_____

| Choose the correct symbol to make each statement true.   <   =   > | | |
|---|---|---|
| 4)      8 _____ 6 | 5)      5 _____ 6 | 6)      4 _____ 3 + 1 |

7)  Use a symbol to state 9 is not equal to 7. _____

8)  Round 345 to the nearest ten. _____

9)  Round 345 to the nearest hundred. _____

10)  Round 4,375 to the nearest thousand. _____

11)  Round 4,375 to the nearest hundred. _____

# Unit 3   Practice Problems

Add the following:

| | | | |
|---|---|---|---|
| 1)  5<br>+ 3 | 2)  13<br>+ 4 | 3)  8<br>+ 6 | 4)  326<br>+ 192 |
| 5) 8 + 234 + 24 | | 6)   3725<br>+ 4432 | |

Subtract the following:

| | | | |
|---|---|---|---|
| 7)   7<br>- 4 | 8)  18<br>- 5 | 9)   86<br>- 43 | 10)   17 - 9 = |
| 11)   405<br>- 282 | | 12) 156853<br>- 62965 | |

| | |
|---|---|
| 13)  Boston Red Sox attendance was 24,456 on Sunday, 32,786 on Monday, and 34,265 on Tuesday. How many fans attended the games? | 14)  A car odometer (mileage gauge) read 43,285 at the end of a 469 mile trip. What did it read at the beginning of the trip? |

# Unit 4   Practice Problems

Multiply the following:

| | | | |
|---|---|---|---|
| 1)  (2)(3) = | 2) $\begin{array}{r} 23 \\ \times\ 12 \\ \hline \end{array}$ | 3) $\begin{array}{r} 123 \\ \times\ 321 \\ \hline \end{array}$ | 4) $\begin{array}{r} 27 \\ \times\ 33 \\ \hline \end{array}$ |

| | |
|---|---|
| 5)  18 × 234 = | 6) $\begin{array}{r} 123 \\ \times\ 307 \\ \hline \end{array}$ |

Divide the following:

| | | |
|---|---|---|
| 7)  8 ÷ 2 = | 8)  84/2 = | 9) $33\overline{)68}$ |

| | |
|---|---|
| 10)  $27\overline{)8,181}$ | 11)  $25\overline{)5,057}$ |

| | |
|---|---|
| 12)  John saved $125 per week for 12 weeks.  What were his total savings? | 13)  Paula earned $216 for a 36 hour week.  What was her hourly wage? |

Unit 4 answers are on page 237.
Unit 4 additional practice problems are on page 159.

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# Unit 5   The Order of Operations

1. Mathematical expressions may involve one or more operations.

    A.  Six important math operations are addition, subtraction, multiplication, division, exponents, and roots.

    B.  These are math expressions with one operation.

    $$4 + 2 \qquad 6 - 3 \qquad (4)(2) \qquad 9 \div 3 \qquad 2^2 \qquad \sqrt{9}$$

    C.  Order of operations is important when a math expression has more than one operation. When given a choice of two math operations to perform, the **higher order operation is done first. Equal order operations are performed from left to right.**

| The Order of Operations | | | |
|---|---|---|---|
| 1st | Operations within parenthesis | 3rd | Multiplication and Division **(middle order)** |
| 2nd | Exponents and Roots **(highest order)** | 4th | Addition and Subtraction **(lowest order)** |

2. Solving mathematical expressions

$$4 + 5 \\ \downarrow \\ 9$$

$$7 - (8 - 3) \\ \downarrow \\ 7 - 5 \\ \downarrow \\ 2$$

$$5 + 7 \times 2 \\ \downarrow \\ 5 + 14 \\ \downarrow \\ 19$$

$$15 \div (5 - 2) + 3^2 \\ \downarrow \\ 15 \div 3 + 3^2 \\ \downarrow \\ 15 \div 3 + 9 \\ \downarrow \\ 5 + 9 \\ \downarrow \\ 14$$

# Unit 5   Practice Problems

| Simplify the following expressions: | | | |
|---|---|---|---|
| 1)  $8 + 3 - 4$ | 3)  $8 - (6 - 4) + 2$ | 5)  $24 \div (6 - 2)4^2$ | 6)  $(9 - 5) + 16 \div 4$ |
| 2)  $12 - (6 - 4)$ | 4)  $16 \div 4 \times 2$ | | |