

I. Part One

Objectives

To learn numbers and number words through 1,000,000

To review operations for addition and subtraction

To review operation symbols

▲ Our number system is based on ten **digits**.

0 1 2 3 4 5 6 7 8 9

■ Digits are combined to form a number that has a value.

■ The number of digits and the arrangement of digits gives the number its value.

1.1 Arrange these numbers in number order.

269

5,296

42

4

25,092

620,592

a. _____ b. _____ c. _____ d. _____ e. _____ f. _____

■ Numbers with more than one digit are multi-digit numbers.

■ The place value chart shows the number value for multi-digit numbers.

— thousands —			— units —		
hundreds	tens	ones	hundreds	tens	ones
4	6	5	2	3	7

465,237 is read, "four hundred sixty-five thousand,
two hundred thirty-seven."

We use a hyphen to join the tens' numbers and ones' numbers.

We write a comma between the thousands' place and hundreds' place.

1.2 The main headings of the number chart are thousands and units.

What are the places under the main headings for thousands and units?

a. _____ b. _____ c. _____

1.3 Write the number words.

a. 3,664 _____

b. 15,152 _____

c. 346,841 _____

III. Part Three

Objectives

To learn patterns in addition
To review symbols for division
To add fractions with unlike denominators
To learn short division

▲ Patterns help us to learn, to find answers, to remember.

■ When we understand a pattern, we can give a correct answer.
■ There are patterns in addition that make it easier for us to learn.

3.1 Add.

$$6 + 0 = \underline{\quad\quad} \quad 18 + 0 = \underline{\quad\quad} \quad 36 + 0 = \underline{\quad\quad} \quad 123 + 0 = \underline{\quad\quad}$$

Adding zero does not change the number.

3.2 Add.

$$\begin{array}{cccc} 8 + 5 = \underline{\quad\quad} & 7 + 9 = \underline{\quad\quad} & 15 + 40 = \underline{\quad\quad} & 63 + 24 = \underline{\quad\quad} \\ 5 + 8 = \underline{\quad\quad} & 9 + 7 = \underline{\quad\quad} & 40 + 15 = \underline{\quad\quad} & 24 + 63 = \underline{\quad\quad} \end{array}$$

Changing the order of numbers does not change the answer.

3.3 Add. Complete the operation in the parentheses first.

$$\begin{array}{cccc} (2 + 5) + 8 = \underline{\quad\quad} & (6 + 3) + 2 = \underline{\quad\quad} & (8 + 2) + (4 + 3) = \underline{\quad\quad} \\ 2 + (5 + 8) = \underline{\quad\quad} & 6 + (3 + 2) = \underline{\quad\quad} & 8 + (2 + 4) + 3 = \underline{\quad\quad} \end{array}$$

Changing the grouping of numbers does not change the answer.

3.4 Add. Complete the operation in the parentheses first.

$$\begin{array}{ll} \text{a. } 7 + 0 + (5 + 6) = \underline{\quad\quad} & 6 + 0 + (5 + 7) = \underline{\quad\quad} \\ \text{b. } (3 + 4) + 0 + 8 = \underline{\quad\quad} & 0 + (8 + 4) + 3 = \underline{\quad\quad} \\ \text{c. } 5 + (6 + 0) + 9 = \underline{\quad\quad} & (9 + 0) + 6 + 5 = \underline{\quad\quad} \\ \text{d. } (8 + 4) + (7 + 3) = \underline{\quad\quad} & (7 + 8) + (3 + 4) = \underline{\quad\quad} \\ \text{e. } (9 + 0) + (5 + 4) = \underline{\quad\quad} & (5 + 0) + (9 + 4) = \underline{\quad\quad} \end{array}$$

Self Test 2



(each answer, 1 point)

2.01 Answer the questions about the metric system of measurements.

- a. How do we describe the number pattern that we use? _____
- b. What number is the metric system based on? _____
- c. Write the names of the basic units in the metric system for ...
length _____, liquid and dry units _____, weight _____.
- d. Write the equivalents.
1 meter = ... _____ decimeters. _____ centimeters. _____ millimeters.
- e. If we know that *about* _____ decimeters = 1 yard, and
_____ decimeters = 1 meter,
we know that the English Standard of
Measurement that the meter most closely resembles is the _____.
- f. The distance between the houses is 9 yards.
About how many meters is that? _____

2.02 Add or subtract.

$$\begin{array}{r} 5\frac{4}{9} \\ + 2\frac{2}{3} \\ \hline \end{array}$$

$$\begin{array}{r} 7\frac{3}{5} \\ + 4\frac{7}{10} \\ \hline \end{array}$$

$$\begin{array}{r} 9\frac{1}{2} \\ - 6\frac{7}{8} \\ \hline \end{array}$$

$$\begin{array}{r} 6\frac{3}{8} \\ - 1\frac{9}{16} \\ \hline \end{array}$$

2.03 Write the problem in digits. Add or subtract. Write the answer in words.

- a. Seven and two-thirds plus
four and seven-ninths is equal to _____
- b. Nine and five-eighths minus
six and three-fourths is equal to _____

MATHEMATICS 510: LIFE PAC TEST

1. Three of each set of four problems expresses the same number. (2 points)
Write the number on the line. Circle the problem that does not belong.

_____ $2 \times 2 \times 3$ $(48 \div 8) \times 2$ $\frac{1}{4}$ of 40 $\frac{36}{3}$

2. There are 20 marbles in a bag: 2 green, 6 black, 8 white, 4 yellow.
One marble falls out.
State the probability of which marble has fallen out of the bag. (16 points total)

- a. Write the ratio of each color marble to the total number in the bag.

green ____:____ black ____:____ white ____:____ yellow ____:____

- b. The probability of the marble being ...

green is ____ out of ____.

black is ____ out of ____.

white is ____ out of ____.

yellow is ____ out of ____.

The ratio of marbles stays the same, but now the bag contains 60 marbles.

- c. Write equivalent fractions for each marble.

green $\frac{\quad}{20} = \frac{\quad}{60}$ black $\frac{\quad}{20} = \frac{\quad}{60}$ white $\frac{\quad}{20} = \frac{\quad}{60}$ yellow $\frac{\quad}{20} = \frac{\quad}{60}$

- d. For a bag of 60 marbles, the probability of the marble being ...

green is ____ out of ____.

black is ____ out of ____.

white is ____ out of ____.

yellow is ____ out of ____.

3. Write numbers in digits. (each answer, 1 point)

a. seven hundred twenty million,
four hundred fifty-three thousand, eighty-nine _____

b. four-ninths _____ sixteen and three-fifths _____

c. eight hundredths _____ five and seven tenths _____

4. Reduce ratios to lowest terms. (each answer, 1 point)

5:25 _____ 3:18 _____ 6:15 _____ 14:21 _____