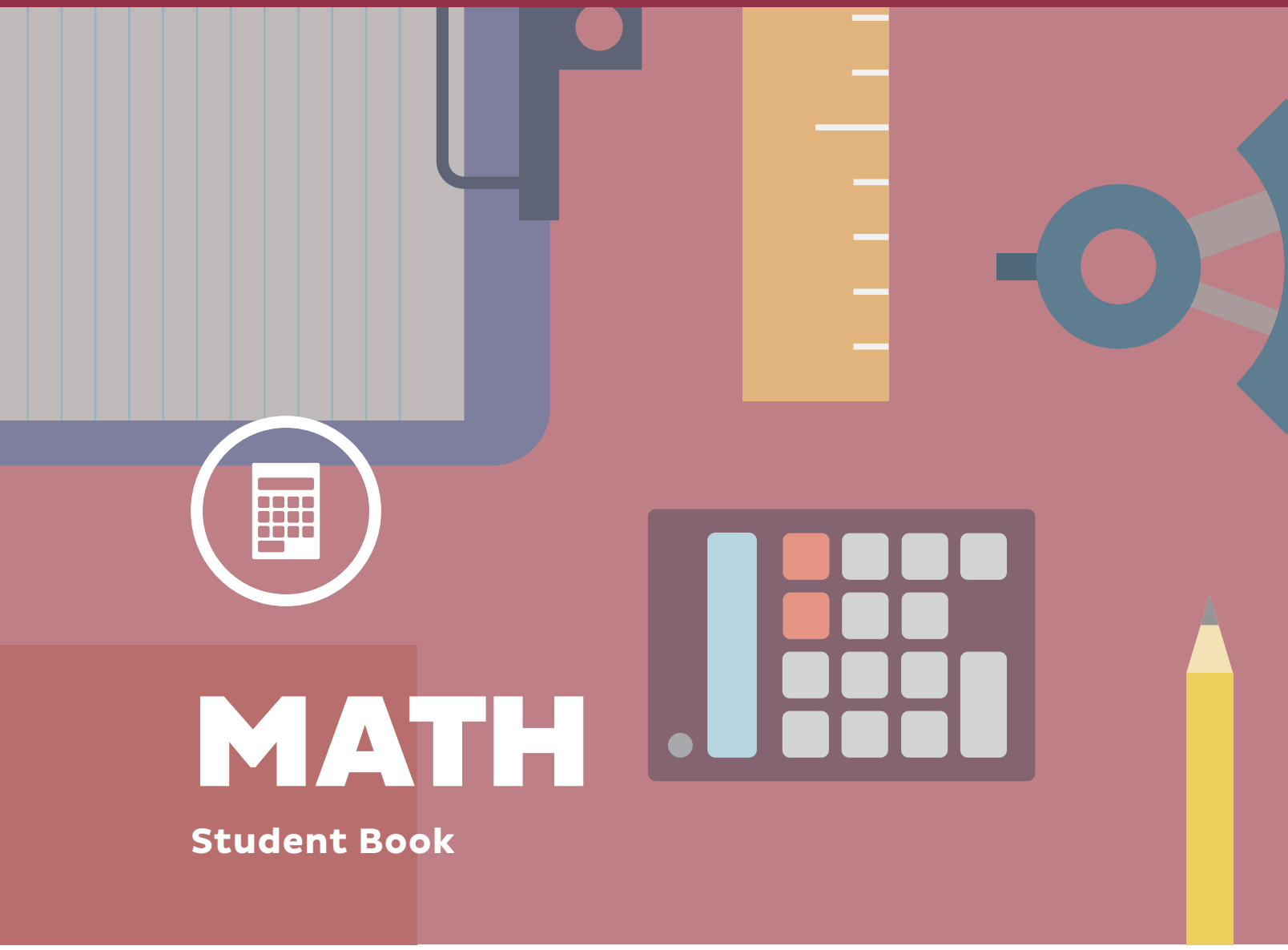
LIFEPAC®



# MATH

## Student Book

**3rd Grade** | Unit 10

Alpha Omega
PUBLICATIONS

# MATH 310
# PROBABILITY, UNITS, AND SHAPES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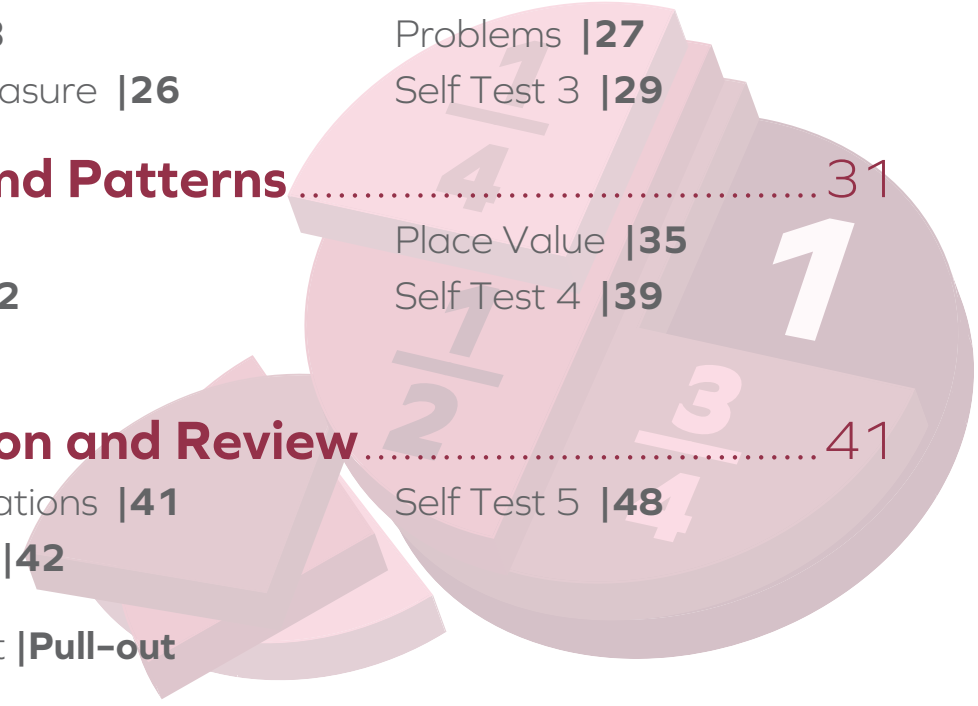

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**804 N. 2nd Ave. E.**
**Rock Rapids, IA 51246-1759**

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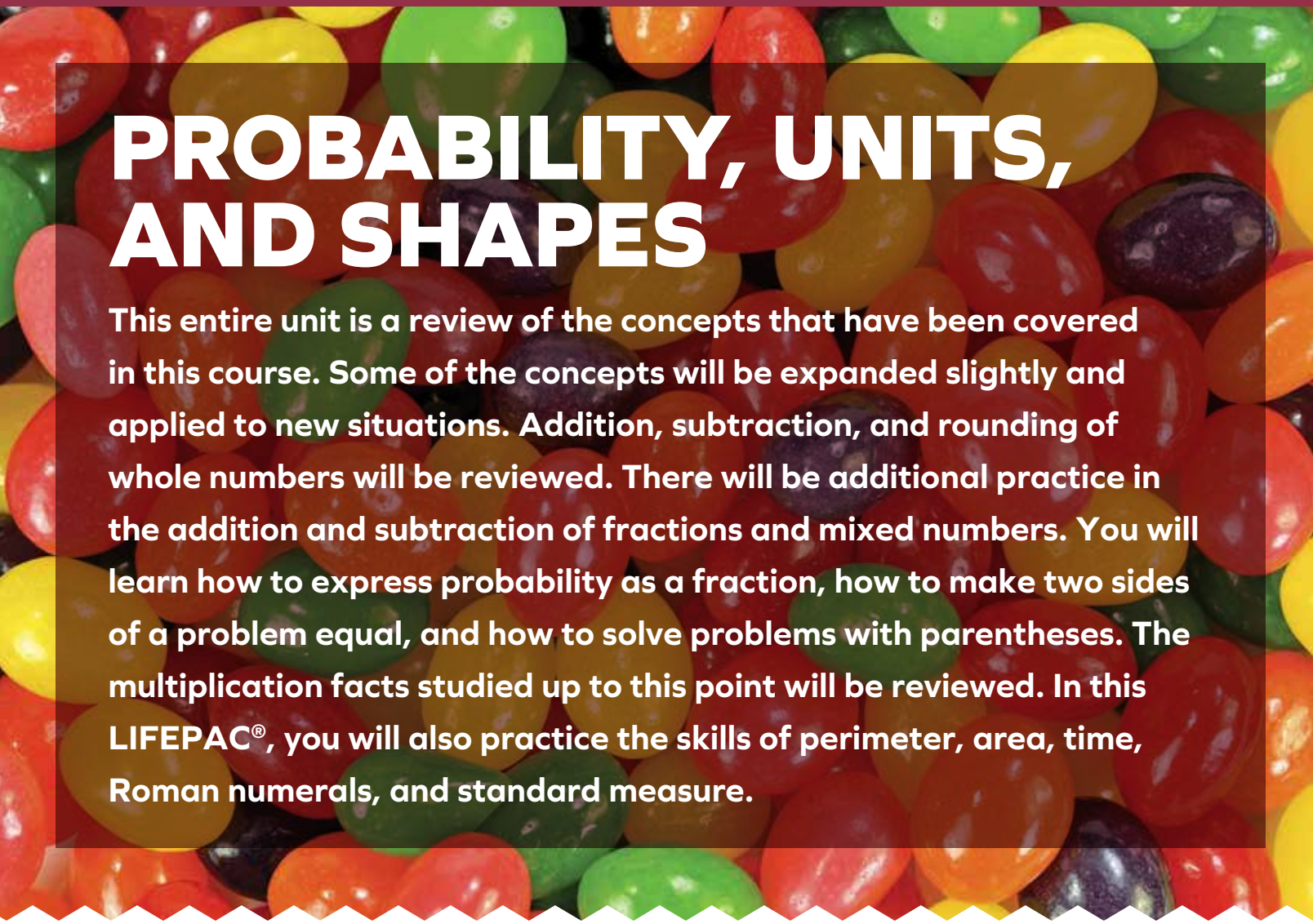


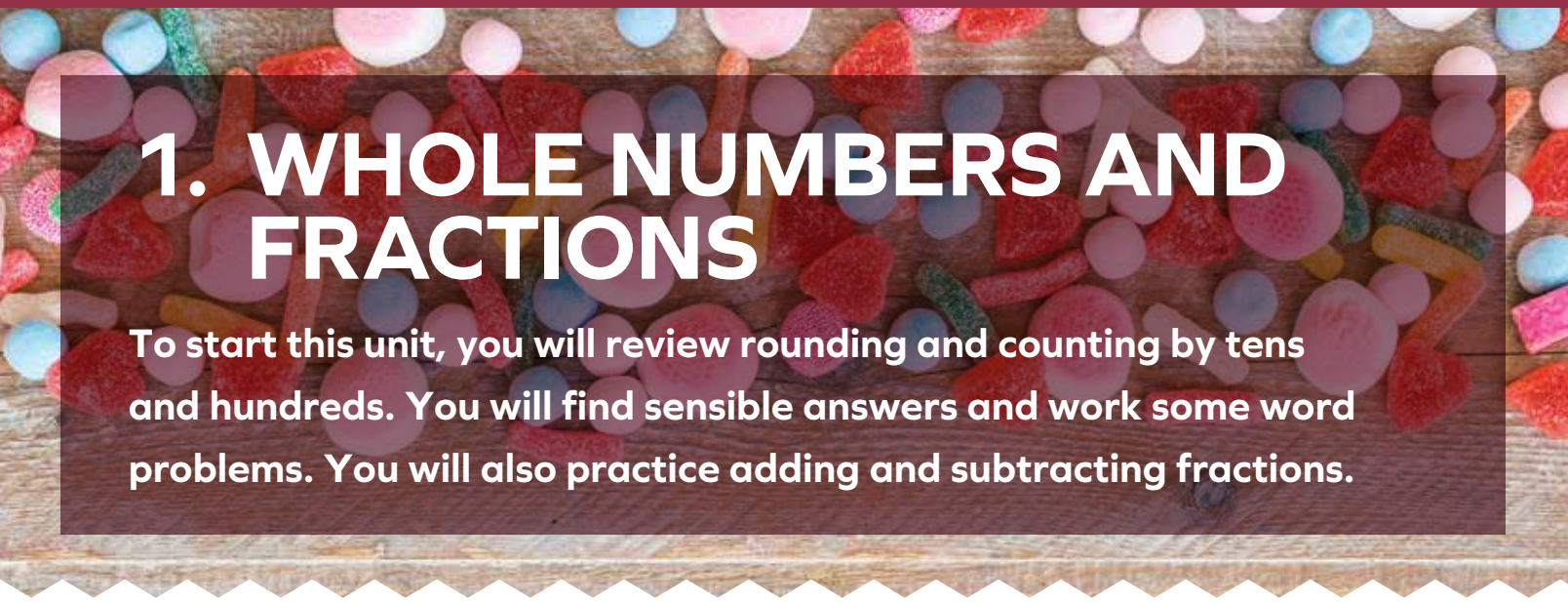
# PROBABILITY, UNITS, AND SHAPES

**This entire unit is a review of the concepts that have been covered in this course. Some of the concepts will be expanded slightly and applied to new situations. Addition, subtraction, and rounding of whole numbers will be reviewed. There will be additional practice in the addition and subtraction of fractions and mixed numbers. You will learn how to express probability as a fraction, how to make two sides of a problem equal, and how to solve problems with parentheses. The multiplication facts studied up to this point will be reviewed. In this LIFEPAC®, you will also practice the skills of perimeter, area, time, Roman numerals, and standard measure.**

## Objectives

**Read these objectives.** The objectives tell you what you will be able to do when you have finished this LIFEPAC.

1. I can round numbers to thousands' place.
2. I can estimate addition and subtraction problems to thousands' place.
3. I can add and subtract fractions vertically and horizontally.
4. I can learn more about probability.
5. I can learn about equations.
6. I can learn to make two sides of a problem equal to each other.
7. I can learn to use parentheses in two-step problems.
8. I can study the relationship between perimeter and area measurement.



# 1. WHOLE NUMBERS AND FRACTIONS

**To start this unit, you will review rounding and counting by tens and hundreds. You will find sensible answers and work some word problems. You will also practice adding and subtracting fractions.**

## Multiples and Rounding

**Complete the following activities.**

**1.1** Count by tens. Write the numbers.

10, _____ , _____ , _____ , _____ ,

_____ , _____ , _____ , _____

Count by hundreds. Write the numbers.

100, _____ , _____ , _____ , _____ ,

_____ , _____ , _____ , _____

**1.2** Round to tens' place or hundreds' place.

| | | |
|---|---|---|
| 47 _____ | 65 _____ | 83 _____ |
| 249 _____ | 550 _____ | 897 _____ |

NOTE to teachers, parents, and students:
As part of a continuing effort to improve the LIFEPAC curriculum a new layout of this unit has been produced. The content of this unit has not changed but the page numbers referenced in the Teacher Notes of the Teacher's Guide may no longer match.

We can decide whether or not we have sensible answers.

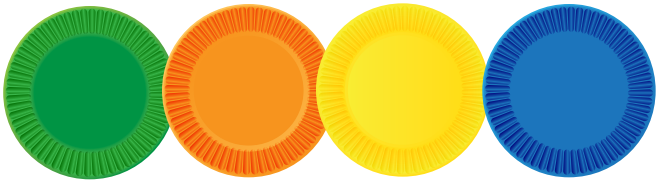
**Complete the following activities.**

**1.3** Round to tens' place or hundreds' place. Add or subtract both problems. Compare. Is your answer sensible?

| | | | |
|---|---|---|---|
| 92 ____ | 84 ____ | 521 ____ | 675 ____ |
| + 36 ____ | + 76 ____ | + 473 ____ | + 182 ____ |
| 72 ____ | 59 ____ | 792 ____ | 410 ____ |
| − 48 ____ | − 23 ____ | − 515 ____ | − 195 ____ |

**1.4** Round the numbers. Estimate the answers.

Jenny was counting paper plates for a party. She had 13 green plates, 18 orange plates, 27 yellow plates, and 21 blue plates. *About* how many plates did she have altogether? _____



The class program was well attended. 221 people came the first night, 310 came the second night, and 425 came the third night. *About* how many people attended the class program?

_____

**1.5** Count by thousands. Write the numbers.

1,000 _____ , _____ , _____ , _____ ,

_____ , _____ , _____ , _____

**1.6** Round to thousands' place.

4,865 _____ 7,540 _____

8,500 _____ 1,231 _____

**We can decide whether or not we have sensible answers.**

**1.7** Round to thousands' place. Add or subtract both problems. Compare. Is your answer sensible?

| | | | | | |
|---|---|---|---|---|---|
| 4,635 | _____ | 1,813 | _____ | 3,002 | _____ |
| + 2,330 | _____ | + 2,790 | _____ | + 4,221 | _____ |
| | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 5,836 | _____ | 9,226 | _____ | 2,930 | _____ |
| − 2,295 | _____ | − 4,841 | _____ | − 1,045 | _____ |
| | | | | | |

**1.8** Round the numbers. Estimate the answers. Jesse was comparing the population in three neighboring towns. The populations were 3,486, 2,320, and 3,891. *About* how many people lived in the three neighboring towns?

_____ + _____ + _____ = _____

Casey's father travelled by plane for his work. He travelled 2,349 miles in January, 1,923 miles in February, and 4,231 miles in March. *About* how many miles did Casey's father travel in three months?

_____ + _____ + _____ = _____

# Addition and Subtraction

**1.9** Add.

| | | | | |
|---|---|---|---|---|
| 2<br>6<br>+ 3 | 9<br>8<br>+ 5 | 47<br>26<br>+ 32 | 58<br>95<br>+ 40 | 293<br>651<br>+ 128 |
| 2,955<br>+ 3,063 | 5,862<br>+ 2,095 | 2,761<br>+ 4,382 | 7,084<br>+ 1,036 | |
| 3,265<br>+ 4,538 | 2,594<br>+ 3,061 | 5,726<br>+ 3,859 | 2,100<br>+ 5,956 | |

**1.10** Follow the steps to add fractions.

Draw the fraction bar. Write the denominator. Add the numerators.

$\frac{1}{4} + \frac{2}{4}$ = _____

$\frac{3}{8} + \frac{4}{8}$ = _____

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

$\frac{2}{3} + \frac{1}{3}$ = _____

$\frac{4}{5} + \frac{1}{5}$ = _____

$\frac{3}{6} + \frac{3}{6}$ = _____

$\frac{1}{8} + \frac{5}{8}$ = _____

$\frac{3}{12} + \frac{2}{12}$ = _____

$\frac{4}{9} + \frac{5}{9}$ = _____

$\frac{1}{2} + \frac{1}{2}$ = _____

**1.11** Subtract.

| | | | | |
|---|---|---|---|---|
| 74 − 36 | 580 − 394 | 706 − 357 | 928 − 361 | 546 − 307 |
| 4,369 − 2,194 | 2,031 − 1,462 | 8,506 − 2,354 | 9,052 − 6,548 | |
| 6,003 − 2,495 | 8,567 − 3,458 | 3,060 − 1,154 | 7,395 − 4,627 | |

**1.12** Follow the steps to subtract fractions.

Draw the fraction bar. Write the denominator. Subtract the numerators.

$$\begin{array}{r} \frac{5}{8} \\ -\ \frac{1}{8} \\ \hline \end{array} \qquad \begin{array}{r} \frac{4}{7} \\ -\ \frac{2}{7} \\ \hline \end{array} \qquad \begin{array}{r} \frac{3}{5} \\ -\ \frac{1}{5} \\ \hline \end{array}$$

$$\frac{5}{6} - \frac{4}{6} = _____$$
$$\frac{8}{12} - \frac{3}{12} = _____$$
$$\frac{2}{3} - \frac{1}{3} = _____$$
$$\frac{7}{8} - \frac{5}{8} = _____$$

$$\begin{array}{r} \frac{9}{10} \\ -\ \frac{4}{10} \\ \hline \end{array} \qquad \begin{array}{r} \frac{6}{9} \\ -\ \frac{3}{9} \\ \hline \end{array} \qquad \begin{array}{r} \frac{2}{4} \\ -\ \frac{1}{4} \\ \hline \end{array}$$

# Multiplication

You have learned to count by 2, 3, 4, 5, and 10. You have learned the multiplication facts for 2, 3, 4, 5, and 10. The answers to the multiplication facts are the multiples of the number.

**Complete the following activities.**

**1.13** Write the multiples from 1 times to 10 times each number.

2 _____ , _____ , _____ , _____ , _____ ,

_____ , _____ , _____ , _____ , _____

3 _____ , _____ , _____ , _____ , _____ ,

_____ , _____ , _____ , _____ , _____

4 _____ , _____ , _____ , _____ , _____ ,
_____ , _____ , _____ , _____ , _____

5 _____ , _____ , _____ , _____ , _____ ,
_____ , _____ , _____ , _____ , _____

10 _____ , _____ , _____ , _____ , _____ ,
_____ , _____ , _____ , _____ , _____

**1.14** Write addition and subtraction fact families.

| 3, 7, 10 | 4, 9, 13 | 7, 8, 15 |
|---|---|---|

**1.15** Add 4 to each number.

6 _____ 2 _____ 9 _____

8 _____ 4 _____ 7 _____

**1.16** Write the standard measurements for time.

_____ seconds = 1 minute _____ minutes = 1 hour

_____ hours = 1 day _____ days = 1 month

_____ months = 1 year _____ days = 1 year

**For this Self Test, study what you have read and done.** The Self Test will check what you remember.

# SELF TEST 1

**Complete these activities** (each answer counts 1 point, except where otherwise noted).

**1.01** Round the numbers. Add or subtract both problems. (4 points each)

| | | | |
|---|---|---|---|
| 39 _____ | 178 _____ | 4,336 _____ | 5,305 _____ |
| + 84 _____ | + 124 _____ | + 2,861 _____ | + 2,721 _____ |
| _____ | _____ | _____ | _____ |

| | | | |
|---|---|---|---|
| 84 _____ | 657 _____ | 8,359 _____ | 7,014 _____ |
| − 32 _____ | − 461 _____ | − 6,962 _____ | − 4,009 _____ |
| _____ | _____ | _____ | _____ |

**1.02** Round the numbers. Estimate the answer.

Casey's father travelled by plane for his work. He travelled 3,776 miles in April, 1,224 miles in May, and 2,621 miles in June. *About* how many miles did Casey's father travel in three months?

_____ + _____ + _____ = _____

**1.03** Write the multiples from 1 times to 10 times each number. (10 points)

3 _____ , _____ , _____ , _____ , _____ ,
_____ , _____ , _____ , _____ , _____

4 _____ , _____ , _____ , _____ , _____ ,
_____ , _____ , _____ , _____ , _____

**1.04** Add.

$$\begin{array}{r} \frac{3}{5} \\ +\ \frac{1}{5} \\ \hline \end{array} \qquad \begin{array}{r} \frac{2}{7} \\ +\ \frac{3}{7} \\ \hline \end{array} \qquad \begin{array}{r} \frac{1}{3} \\ +\ \frac{2}{3} \\ \hline \end{array} \qquad \frac{1}{2} + \frac{1}{2} = _____$$

**1.05** Subtract.

$$\begin{array}{r} \frac{7}{9} \\ -\ \frac{2}{9} \\ \hline \end{array} \qquad \begin{array}{r} \frac{8}{12} \\ -\ \frac{5}{12} \\ \hline \end{array} \qquad \begin{array}{r} \frac{5}{10} \\ -\ \frac{3}{10} \\ \hline \end{array} \qquad \frac{6}{8} - \frac{4}{8} = _____$$

**Teacher check:** Initials _____

Score _____ Date _____

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MAT_Gr3-5

Alpha Omega
PUBLICATIONS

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Rock Rapids, IA 51246-1759

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MAT0310 – Jan '16 Printing

ISBN 978-1-58095-390-0