



LIFE·PAC®

Math

Student Book

Grade 5
Unit 2



Alpha Omega Publications®

MATHEMATICS 502

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Author:

Carol Bauler, B.A.

Editor:

Alan Christopherson, M.S.

Graphic Design:

JoAnn Cumming, A.A.



Alpha Omega Publications®

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

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I. Part One

Objectives

To multiply by a two-digit number
To learn about improper fractions and mixed numbers
To simplify fractions

▲ Multiples are the products of multiplication facts.

1.1 Write the multiples of 5 and 9. Begin with 0.

a. _____

b. _____

1.2 Write a multiplication fact for each product.

a.

$$\begin{array}{r} \times \\ \hline 14 \end{array}$$

$$\begin{array}{r} \times \\ \hline 25 \end{array}$$

$$\begin{array}{r} \times \\ \hline 54 \end{array}$$

$$\begin{array}{r} \times \\ \hline 32 \end{array}$$

$$\begin{array}{r} \times \\ \hline 9 \end{array}$$

$$\begin{array}{r} \times \\ \hline 15 \end{array}$$

$$\begin{array}{r} \times \\ \hline 72 \end{array}$$

$$\begin{array}{r} \times \\ \hline 15 \end{array}$$

b.

$$\begin{array}{r} \times \\ \hline 42 \end{array}$$

$$\begin{array}{r} \times \\ \hline 16 \end{array}$$

$$\begin{array}{r} \times \\ \hline 81 \end{array}$$

$$\begin{array}{r} \times \\ \hline 24 \end{array}$$

$$\begin{array}{r} \times \\ \hline 28 \end{array}$$

$$\begin{array}{r} \times \\ \hline 56 \end{array}$$

$$\begin{array}{r} \times \\ \hline 35 \end{array}$$

$$\begin{array}{r} \times \\ \hline 63 \end{array}$$

1.3 Write the largest multiple ...

a. of 6 that is less than ... 49 _____ 20 _____ 37 _____ 59 _____

b. of 8 that is less than ... 69 _____ 47 _____ 51 _____ 22 _____

c. of 4 that is less than ... 15 _____ 38 _____ 21 _____ 35 _____

1.4 Circle the correct answer.

a. $3 \times 8 (>, <) 25$

$6 \times 6 (>, <) 35$

$4 \times 4 (>, <) 14$

b. $9 \times 2 (>, <) 19$

$7 \times 6 (>, <) 40$

$8 \times 3 (>, <) 26$

c. $3 \times 7 (>, <) 28$

$5 \times 4 (>, <) 24$

$9 \times 7 (>, <) 64$

▲ We can solve multiplication problems with two-digit multipliers.

■ Multiply two small problems. Add the answers.

$$\begin{array}{r} 58 \\ \times 36 \\ \hline 348 \\ + 1740 \\ \hline 2,088 \end{array}$$

$$\begin{array}{r} 58 \\ \times 6 \\ \hline 348 \end{array}$$
$$\begin{array}{r} 58 \\ \times 3 \\ \hline 174 \end{array}$$

Multiply 58 by 6 ones.

Write a zero (0) place holder in ones' place below the 8.

Multiply 58 by 3 tens.

Total the products.

1.5 Follow the steps. Solve the problem.

$$\begin{array}{r} 436 \\ \times 27 \\ \hline \\ + \\ \hline \end{array}$$

$$\begin{array}{r} 436 \\ \times 7 \\ \hline \end{array}$$
$$\begin{array}{r} 436 \\ \times 2 \\ \hline \end{array}$$

Multiply 436 by 7 ones.

Write the answer in the problem.

Write a zero (0) place holder.

Multiply 436 by 2 tens.

Write the answer in the problem.

Add.

1.6 Multiply.

a.
$$\begin{array}{r} 34 \\ \times 47 \\ \hline \\ + \\ \hline \end{array}$$

$$\begin{array}{r} 34 \\ \times 7 \\ \hline \end{array}$$
$$\begin{array}{r} 34 \\ \times 4 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 81 \\ \times 25 \\ \hline \\ + \\ \hline \end{array}$$

$$\begin{array}{r} 81 \\ \times 5 \\ \hline \end{array}$$
$$\begin{array}{r} 81 \\ \times 2 \\ \hline \end{array}$$

c.
$$\begin{array}{r} 213 \\ \times 35 \\ \hline \\ + \\ \hline \end{array}$$

$$\begin{array}{r} 213 \\ \times 5 \\ \hline \end{array}$$
$$\begin{array}{r} 213 \\ \times 3 \\ \hline \end{array}$$

d.
$$\begin{array}{r} 3,508 \\ \times 42 \\ \hline \\ + \\ \hline \end{array}$$

$$\begin{array}{r} 3,508 \\ \times 2 \\ \hline \end{array}$$
$$\begin{array}{r} 3,508 \\ \times 4 \\ \hline \end{array}$$

1.7 Multiply.

a.

$$\begin{array}{r} 24 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 76 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 87 \\ \times 6 \\ \hline \end{array}$$

b.

$$\begin{array}{r} 83 \\ \times 12 \\ \hline \end{array}$$

$$\begin{array}{r} 64 \\ \times 25 \\ \hline \end{array}$$

$$\begin{array}{r} 93 \\ \times 58 \\ \hline \end{array}$$

c.

$$\begin{array}{r} 74 \\ \times 46 \\ \hline \end{array}$$

$$\begin{array}{r} 638 \\ \times 62 \\ \hline \end{array}$$

$$\begin{array}{r} 126 \\ \times 53 \\ \hline \end{array}$$

d.

$$\begin{array}{r} 249 \\ \times 74 \\ \hline \end{array}$$

$$\begin{array}{r} 385 \\ \times 54 \\ \hline \end{array}$$

$$\begin{array}{r} 496 \\ \times 87 \\ \hline \end{array}$$

e.

$$\begin{array}{r} 7,645 \\ \times 72 \\ \hline \end{array}$$

$$\begin{array}{r} 4,785 \\ \times 93 \\ \hline \end{array}$$

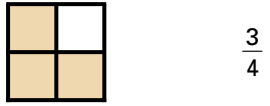
$$\begin{array}{r} 6,356 \\ \times 73 \\ \hline \end{array}$$

Have you
learned
your facts?

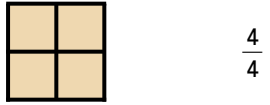


▲ Fractions show a relationship between two numbers.

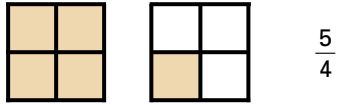
When the numerator is less than the denominator, the fraction is *less than* one whole. This is a **proper fraction**.



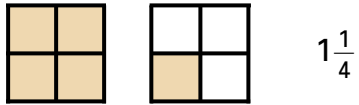
When the numerator and denominator are the same number, the fraction is *equal to* one whole. This is an **improper fraction**.



When the numerator is greater than the denominator, the fraction is *more than* one whole. This is an **improper fraction**.



A whole number may be written with a proper fraction. This is a **mixed number**.

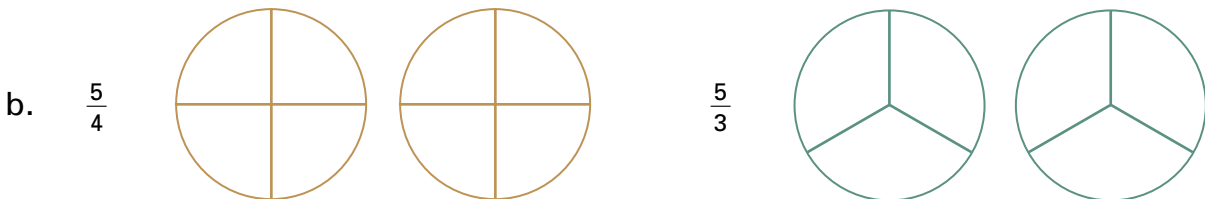
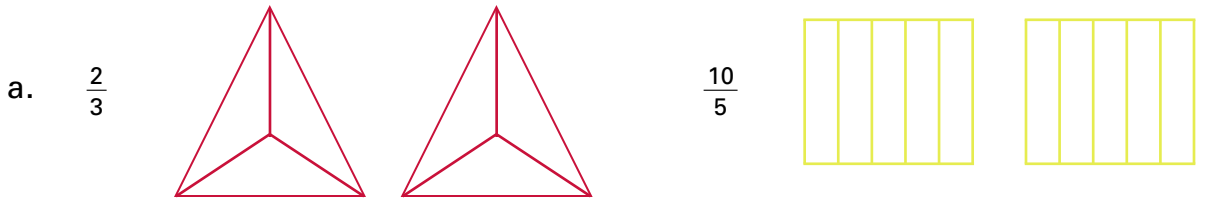


1.8 Describe each number as ...

a. proper fraction b. improper fraction c. mixed number

- a. $\frac{9}{8}$ _____ $\frac{3}{8}$ _____ $\frac{8}{5}$ _____ $\frac{8}{17}$ _____
- b. $\frac{6}{3}$ _____ $4\frac{1}{9}$ _____ $\frac{16}{4}$ _____ $\frac{2}{3}$ _____
- c. $2\frac{1}{4}$ _____ $\frac{4}{7}$ _____ $\frac{9}{9}$ _____ $\frac{12}{6}$ _____

1.9 Shade the part of the illustration that represents the fraction.



▲ We can simplify improper fractions.

■ We can change improper fractions to whole numbers or mixed numbers.

Divide the denominator into the numerator.
The answer is a whole number.

$$\begin{array}{|c|c|} \hline \square & \square \\ \hline \square & \square \\ \hline \end{array} \quad \begin{array}{|c|c|} \hline \square & \square \\ \hline \square & \square \\ \hline \end{array} = \frac{8}{4} \quad \begin{array}{r} 2 \\ 4 \overline{)8} \\ \hline \end{array} = 2 \text{ wholes}$$

Divide the denominator into the numerator. Write the remainder as a fraction.
The answer is a mixed number.

$$\begin{array}{|c|c|} \hline \square & \square \\ \hline \square & \square \\ \hline \end{array} \quad \begin{array}{|c|c|} \hline \square & \square \\ \hline \square & \square \\ \hline \end{array} \quad \begin{array}{|c|c|} \hline \square & \square \\ \hline \square & \square \\ \hline \end{array} = \frac{9}{4} \quad \begin{array}{r} 2 \text{ R}1 \\ 4 \overline{)9} \\ \hline \end{array} = 2\frac{1}{4} \text{ wholes}$$

1.10 Change improper fractions to mixed numbers or whole numbers. Divide.

a. $\frac{14}{7} =$ $\frac{24}{6} =$ $\frac{21}{5} =$

b. $\frac{17}{9} =$ $\frac{20}{4} =$ $\frac{17}{2} =$

c. $\frac{9}{3} =$ $\frac{11}{4} =$ $\frac{8}{7} =$

1.11 Add. Simplify answers.

a.
$$\begin{array}{r} \frac{4}{8} \\ + \frac{5}{8} \\ \hline \end{array} =$$

$$\begin{array}{r} \frac{7}{9} \\ + \frac{6}{9} \\ \hline \end{array} =$$

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

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

b.
$$\begin{array}{r} \frac{2}{3} \\ + \frac{2}{3} \\ \hline \end{array} =$$

$$\begin{array}{r} \frac{4}{6} \\ + \frac{5}{6} \\ \hline \end{array} =$$

$$\begin{array}{r} \frac{1}{2} \\ + \frac{1}{2} \\ \hline \end{array} =$$

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

Self Test 1



1.01 Write the multiples of 4 and 7. Begin with 0. (this problem, 4 points)

a. _____

b. _____

1.02 Write the largest multiple . . . (each answer, 1 point)

a. of 5 that is less than 22 _____ 18 _____ 47 _____

b. of 9 that is less than 20 _____ 49 _____ 61 _____

1.03 Circle the answer. (each answer, 1 point)

a. $8 \times 6 (>, <) 52$ $3 \times 9 (>, <) 36$ $5 \times 8 (>, <) 51$

b. $7 \times 8 (>, <) 54$ $9 \times 8 (>, <) 71$ $3 \times 4 (>, <) 15$

1.04 Multiply. (each answer, 2 points)

a.

$$\begin{array}{r} 32 \\ \times 43 \\ \hline \end{array}$$

$$\begin{array}{r} 65 \\ \times 27 \\ \hline \end{array}$$

$$\begin{array}{r} 328 \\ \times 67 \\ \hline \end{array}$$

b.

$$\begin{array}{r} 568 \\ \times 84 \\ \hline \end{array}$$

$$\begin{array}{r} 2,971 \\ \times 54 \\ \hline \end{array}$$

$$\begin{array}{r} 5,382 \\ \times 48 \\ \hline \end{array}$$

1.05 Describe each number as ... (each answer, 1 point)

a. proper fraction b. improper fraction c. mixed number

a. $\frac{9}{3}$ _____ $\frac{5}{7}$ _____ $1\frac{3}{8}$ _____

b. $\frac{4}{12}$ _____ $2\frac{1}{3}$ _____ $\frac{10}{10}$ _____

1.06 Shade the part of the illustration that represents the fraction. (1 point)

$\frac{7}{6}$



1.07 Change improper fractions to mixed numbers or whole numbers. (each answer, 1 point)

a. $\frac{27}{3}$ $\frac{5}{2}$ $\frac{9}{4}$

b. $\frac{10}{5}$ $\frac{6}{2}$ $\frac{14}{9}$

1.08 Add. Simplify answers. (each answer, 1 point)

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

=

$$\begin{array}{r} \frac{7}{8} \\ + \frac{2}{8} \\ \hline \end{array}$$

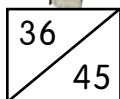
=

$$\begin{array}{r} \frac{9}{12} \\ + \frac{8}{12} \\ \hline \end{array}$$

=

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

=



My Score _____

Teacher Check _____