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New York State Assessment Mathematics Grade 3

This sample includes the following:

Student Book pages (7 pages)
- Cover and Table of Contents
- Guided Practice pages
- Independent Practice pages

To **Create** a World in which Children love to Learn!

New York State Assessment

Student Book

Preparing for Next Generation Success in

Mathematics

Table of Contents

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Two-Step Multiplication and Division Problems

Lesson Focus

I can solve one- and two-step word problems that involve multiplication and division.

1. What does it mean to make a model of a problem?

Let's Practice!

Solving a Two-Step Problem

A class is setting up chairs for a play. Right now, the chairs are in 3 rows with 8 chairs in each row. Mr. G wants the students to rearrange the chairs so there are 6 chairs in each row. How many rows of chairs will there be?

What are you being asked to do? Draw a circle around the most important words.

Step 1

What do you need to find out first? You need to know how many chairs there are. You can use an array to model 3 rows of 8 chairs.

You can see from the array that $3 \times 8 = 24$. There are 24 chairs.

Step 2

What do you need to do next? What equations do you need to solve now?

You can write a division problem or a multiplication problem. What model will you use?

$24 \div 6 =$ _____ or $6 \times$ _____ $= 24$

6 chairs   6 chairs   6 chairs   6 chairs
0   3   6   9   12   15   18   21   24

You can use a number line to find how many rows, or groups, of 6 you can make. How many groups do you see?
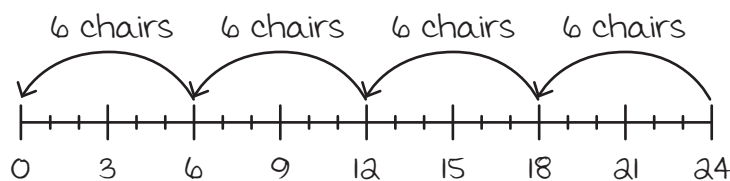
You can make 4 groups of 6.

$24 \div 6 = 4$ and $6 \times 4 = 24$

Answer: 4 rows

Independent Practice

Directions: Use multiplying and dividing to solve the problems. Be sure to show your work.

1 Some kids ran a lemonade stand together. There were 4 of them. They made $32. They will divide the money equally. How much money will each kid get?

A $8

B $12

C $28

D $16

2 There are 28 students at recess. The teacher wants them to line up in 4 equal lines. How many students should stand in each line?

A 12

B 8

C 7

D 24

3 Sammy likes cookies. If she eats 3 cookies a day, how many days will it take her to eat a bag of 18 cookies?

A 21 days

B 6 days

C 15 days

D 9 days

4 Mica walks 5 miles every day for 8 days. Mario walks 4 miles every day for 9 days. Which statement is true?

A Mica walked further than Mario.

B Mario walked further than Mica.

C Mica and Mario walked the same distance.

5 The students need to rearrange the chairs. Right now, the chairs are in 4 rows with 12 chairs in each row. They want there to be 8 chairs in each row. How many rows will there be?

A 4

B 16

C 6

D 12

6 Hudson is having a birthday party. He is having 10 friends over. He wants them each to get 6 balloons. Balloons come in packs of 12. How many packs of balloons should he buy?

A 22

B 16

C 4

D 5

Finding the Unknown

Lesson Focus

I can understand and solve multiplication and division problems with unknowns in different places.

1. Which details help you understand this objective? Rewrite it in your own words.

   _____

2. What is an *unknown*?

   _____

   _____

Let's Practice!

Find the Unknown

Example 1

Find the unknown in the equation.

$3 \times \underline{?} = 33$

How can you think about the problem? You can think, "3 groups of some number is the same as 33." You can think, "3 times some number is the same as 33."

The missing factor is 11 because 3 times 11 equals 33.

What are you being asked to do? Draw a circle around the most important words.

What is unknown in this equation? There is an unknown factor.

Example 2

You have 36 apples. You place them into bags. Each bag has 9 apples in it. How many bags did you use? Use the equation to solve the problem.

$36 \div \underline{?} = 9$

First, think about what the unknown is in the problem. It is the number of bags, or the number of equal groups.

$\underline{?} \times 9 = 36$

You can rewrite it as a multiplication problem. How many groups of 9 is the same as 36?

4 groups of 9 equals 36, so b equals 4.

You used 4 bags.

What are you being asked to do? What strategies will you use?

What is unknown in this equation? There is an unknown factor.

Independent Practice

Directions: Choose the correct answer for each problem.

1 What number makes this equation true? $7 = \underline{\quad ? \quad} \div 12$

    A 28

    B 19

    C 84

    D 72

2 What number makes this equation true? $\underline{\quad ? \quad} \div 8 = 7$

    A 56

    B 15

    C 64

    D 27

3 What number makes this equation true? $36 \div \underline{\quad ? \quad} = 9$

    A 6

    B 9

    C 8

    D 4

4 What number makes this equation true? $7 = \underline{\quad ? \quad} \div 5$

    A 35

    B 45

    C 12

    D 15

5 In which equation is 15 the correct answer?

    A $\underline{\quad ? \quad} \div 3 = 5$

    B $20 \div 4 = \underline{\quad ? \quad}$

    C $5 \times \underline{\quad ? \quad} = 25$

    D $\underline{\quad ? \quad} \div 5 = 10$

6 Solve the equation: A student ran 7 laps. It took them 21 minutes. Each lap took the same amount of time. How long did each lap take? $7 \times \underline{\quad ? \quad} = 21$

    A 27

    B 3

    C 10

    D 2

7 Solve the equation: You have 20 inches of yarn. You cut it into pieces that are 4 inches long. How many pieces will you have? $20 \div \underline{\quad ? \quad} = 4$

    A 2

    B 16

    C 24

    D 5

8 Solve the equation: Ben has 8 bags. There are 7 balloons in each bag. How many balloons does he have? $8 \times 7 = \underline{\quad ? \quad}$

    A 78

    B 65

    C 56

    D 15