Guided Practice

Solve each equation. Check your solution. (Example 1)

6 a. $\frac{m}{6} = 10 \cdot 6$

5 b. $\frac{k}{5} = 11 \cdot 5$

13 c. $\frac{v}{13} = 14 \cdot 13$

Show your work.

4. Kerry and Tya are sharing a pack of stickers. Each girl gets 11 stickers. Write and solve a division equation to find how many total stickers there are. (Example 2)

$2 \cdot \frac{s}{2} = 11 \cdot 2$

$s = 22$

5. Chen is buying a ham. He wants to divide it into 6.5-ounce servings for 12 people. Write and solve a division equation to find what size ham Chen should buy. (Example 3)

$6.5 \cdot \frac{h}{6.5} = 12 \cdot 6.5$

12×6.5

9. **Reason Inductively** *True* or *false*: $\frac{x}{3}$ is equivalent to $\frac{1}{3}x$. Explain your reasoning.

10. **Persevere with Problems** Explain how you would solve $\frac{16}{c} = 8$. Then solve the equation.

$c = 2$

11. **Multiple Representations** Every autumn, the North American Monarch butterfly migrates up to 3,000 miles to California and Mexico where it hibernates until early spring. The butterfly travels on average 50 miles per day.

a. **Algebra** Write an equation that represents the distance d a butterfly will travel in t days.

b. **Tables** Use the equation to complete the table.

$\frac{16}{2} = 8$

$c \cdot \frac{16}{c} = 8 \cdot c$

$\frac{16}{8} = \frac{8c}{8}$

Solve each equation. Check your solution. (Example 1)

1. $\frac{m}{6} = 10$ **60**

2. $\frac{k}{5} = 11$ **55**

3. $\frac{v}{13} = 14$ **182**

Show your work.

4. Kerry and Tya are sharing a pack of stickers. Each girl gets 11 stickers. Write and solve a division equation to find how many total stickers there are. (Example 2)
$\frac{s}{11} = 2$; 22 stickers

5. Chen is buying a ham. He wants to divide it into 6.5-ounce servings for 12 people. Write and solve a division equation to find what size ham Chen should buy. (Example 3) **$\frac{h}{6.5} = 12$; 78 oz**

6. **Building on the Essential Question** When solving an equation, why is it necessary to perform the same operation on each side of the equals sign?
Sample answer: To maintain equality, an operation performed on one side of an equation must also be performed on the other side.

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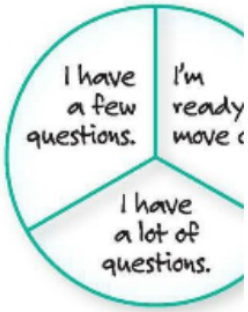

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FOLDABLES Time to update yo

Independent Practice

Go online for Step-by-Step Solutions

Solve each equation. Check your solution. (Examples 1 and 3)

1. $5 = \frac{p}{4}$ **20**

2. $17 = \frac{w}{6}$ **102**

3. $4.7 = \frac{g}{3.2}$ **15.04**

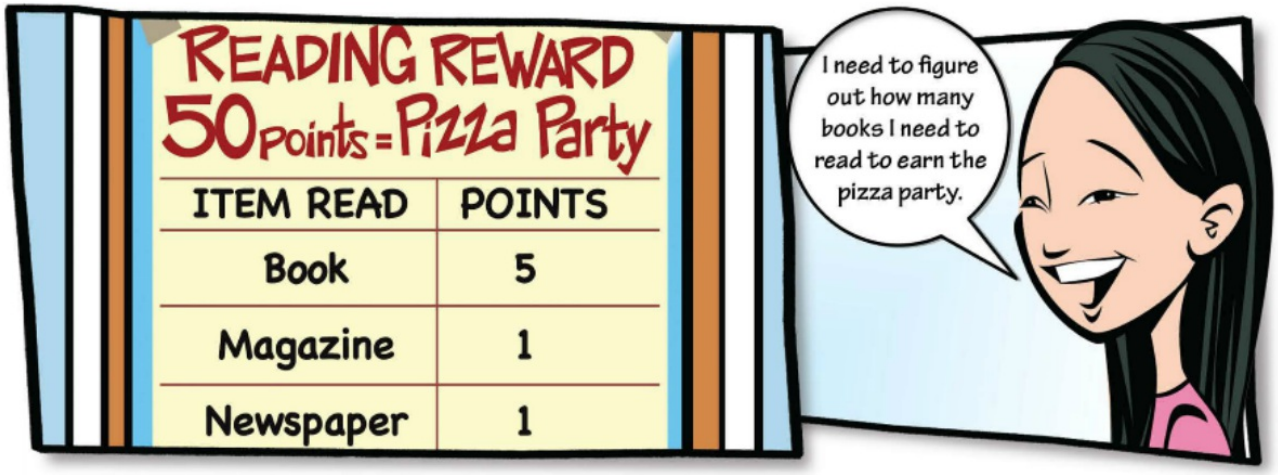
Show your work.

Write and solve a division equation to solve each problem. (Examples 2 and 3)

4. Sophia is buying party favors. She has a budget of $2.75 a person for 6 people. How much can Sophia spend on party favors?
$\frac{f}{2.75} = 6$; $16.50

5. Caroline baked 3 dozen oatmeal raisin cookies for the bake sale at school. This is one fourth the number of dozens of cook she baked in all. How many dozens of cookies did she bake in all?
$\frac{x}{4} = 3$; 12 dozen

6. CCSS **Model with Mathematics** Refer to the graphic novel frame below for Exercises a–b.



7. **Identify Structure** Write the property used to solve each type of equation.

+ **Subtraction Property of Equality**	− **Addition Property of Equality**
× **Division Property of Equality**	÷ **Multiplication Property of Equality**

H.O.T. Problems Higher Order Thinking

8. **Reason Abstractly** Write a division equation that has a solution of 42.

Sample answer: $\frac{x}{7} = 6$

9. **Reason Inductively** *True* or *false:* $\frac{x}{3}$ is equivalent to $\frac{1}{3}x$. Explain your reasoning.

True; Sample answer: Dividing by 3 is the same as multiplying by $\frac{1}{3}$.

10. **Persevere with Problems** Explain how you would solve $\frac{16}{c} = 8$. Then solve the equation.

Sample answer: Multiply both sides of the equation by *c*, then divide both sides of the equation by 8; 2.

11. **Multiple Representations** Every autumn, the North American Monarch butterfly migrates up to 3,000 miles to California and Mexico where it hibernates until early spring. The butterfly travels on average 50 miles per day.

a. **Algebra** Write an equation that represents the distance *d* a butterfly will travel in *t* days. **$d = 50t$**

b. **Tables** Use the equation to complete the table.

c. **Words** Use the pattern in the table to determine how many days it will take the butterfly to travel 2,500 miles. **50 days**

Time (days)	1	2	3	4	5
Distance (miles)	50	100	150	200	250