



Additional Practice 9-3

Use Multiplication to Divide

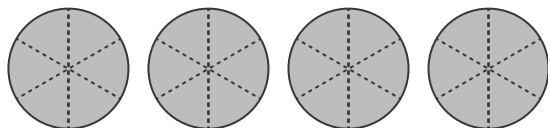
Another Look!

How many sixths are in 4?

Find $4 \div \frac{1}{6}$. Use a model to help.

There are 6 sixths in each whole, so 4 wholes contain $4 \times 6 = 24$ sixths.

$$4 \div \frac{1}{6} = 24$$



Check your answer.

$$24 \times \frac{1}{6} = \frac{24}{6} = 4$$

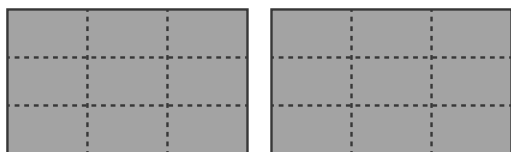
The answer checks.

You can use multiplication to check division.

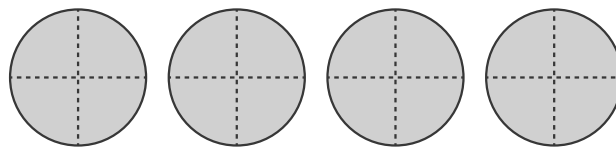


In **1–4**, use the model to find each quotient. Use multiplication to check your answer.

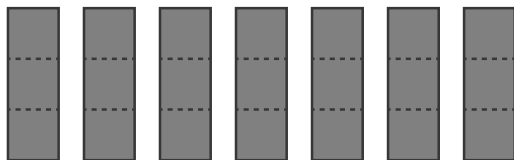
1. $2 \div \frac{1}{9}$ **18; $18 \times \frac{1}{9} = 2$**



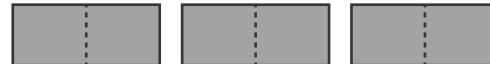
2. $4 \div \frac{1}{4}$ **16; $16 \times \frac{1}{4} = 4$**



3. $7 \div \frac{1}{3}$ **21; $21 \times \frac{1}{3} = 7$**



4. $3 \div \frac{1}{2}$ **6; $6 \times \frac{1}{2} = 3$**



In **5–7**, draw a model to find each quotient. Use multiplication to check your answer.

Check students' diagrams.

5. $4 \div \frac{1}{6}$ **24; $24 \times \frac{1}{6} = 4$**

6. $2 \div \frac{1}{8}$ **16; $16 \times \frac{1}{8} = 2$**

7. $3 \div \frac{1}{12}$ **36; $36 \times \frac{1}{12} = 3$**



- 8. Use Structure** Use the numbers in the multiplication equation $45 \times \frac{1}{9} = 5$ to write a division equation involving division by a fraction.

$$5 \div \frac{1}{9} = 45$$

- 9.** A square has a side length of 6.2 centimeters. What is the perimeter of the square?

24.8 cm

- 10.** Denise makes beaded bracelets for a craft fair. She uses $\frac{1}{4}$ yard of yarn for each bracelet. How many bracelets can she make from 10 yards of yarn?

40 bracelets

- 11.** Arthur paid \$0.84 for 0.25 pound of potato salad. How much does one pound cost?

\$3.36

- 12. Higher Order Thinking** A company donated 5 acres of land to the city. How many more small garden plots would fit on the land than medium garden plots? Explain.

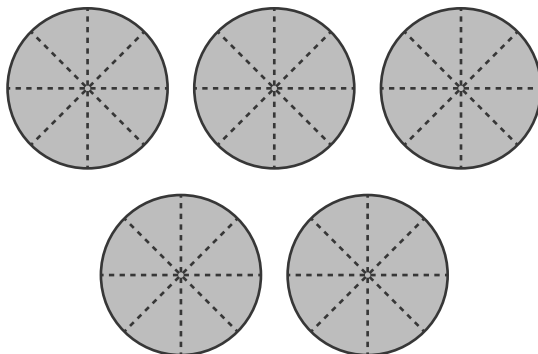
10 more small garden plots; Sample explanation: 30 small garden plots would fit because $5 \div \frac{1}{6} = 30$.

20 medium garden plots would fit because $5 \div \frac{1}{4} = 20$. $30 - 20 = 10$.

DATA	Community Garden Plots	Size (fraction of an acre)
	Small	$\frac{1}{6}$
	Medium	$\frac{1}{4}$
	Large	$\frac{1}{3}$

Assessment Practice

- 13.** Audrey drew a model to determine how many eighths are in 5.



Part A

Describe Audrey's work by writing a division equation that includes a fraction.

$$5 \div \frac{1}{8} = 40$$

Part B

Check your answer by using the numbers in your division equation to write a multiplication equation.

$$40 \times \frac{1}{8} = 5$$