Name _____ Answer Key

TOPIC 9

Reteaching

Set A pages 451–456

A fraction can be written as the product of a whole number and a unit fraction. Consider the model shown below.

Each fraction strip represents the unit fraction $\frac{1}{8}$.

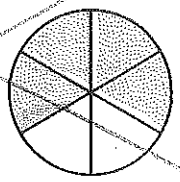
There are 5 fraction strips in all.

So, the model represents $5 \times \frac{1}{8}$, or $\frac{5}{8}$.

Select a digital tool to solve the problems in Set A.

Remember that a unit fraction has a numerator of 1.

Write a multiplication equation with a unit fraction that describes the fraction shown. Use fraction strips to help.

1. 

2. 

3. $\frac{4}{5} = \square \times \frac{\square}{\square}$

4. $\frac{7}{12} = \square \times \frac{\square}{\square}$

Set B pages 457–462, 463–468

Find $\frac{2}{3}$ of 6.

One Way

$\frac{1}{3}$ of 6 is 2.

$\frac{2}{3}$ is twice as much as $\frac{1}{3}$.

So, $\frac{2}{3}$ of 6 is 4.

Another Way

Multiply first and then divide.

$\frac{2}{3} \times 6 = \frac{12}{3} = 4$

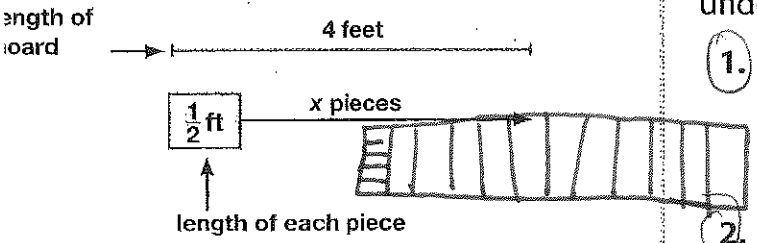
Remember that the word *of* often means to multiply.

Find each product. Simplify, if possible.

1. $\frac{4}{1} \times \frac{1}{2} = \frac{4}{2} = 2$
2. $\frac{3}{4}$ of 16 12
3. $24 \times \frac{1}{8}$ 3
4. $\frac{4}{7}$ of 28 16
5. $\frac{4}{5} \times 37$
6. $\frac{7}{8} \times 219$

Set C pages 469–474

A 4-foot board is cut into pieces that are $\frac{1}{2}$ foot in length. How many pieces are there?



$4 \div \frac{1}{2} = 4 \times \frac{2}{1} = \frac{8}{1} = 8$

There are 8 pieces.

Remember that you can draw a picture or use objects such as fraction strips to help you understand the problem.

1. A 12-foot-long playground is marked off into $\frac{1}{5}$-foot-long sections for a game. How many sections are there? $12 \div \frac{1}{5}$ $12 \times \frac{5}{1} = 60$

2. A 4-pound package of peanuts is divided into $\frac{1}{4}$-pound packages. How many $\frac{1}{4}$-pound packages will there be?

$4 \div \frac{1}{4}$

$\frac{4}{1} \times \frac{4}{1} =$ 16 packages

Set D pages 475–480, 481–486

Find $\frac{1}{2} \div 4$.

Use multiplication.
Multiply by the reciprocal of the divisor.

$$\frac{1}{2} \div 4 = \frac{1}{2} \times \frac{1}{4}$$
$$= \frac{1}{8}$$

Remember,
you can use objects or a number line to help you divide.

Remember that to write the reciprocal of a fraction, switch the numerator and denominator.

Find each quotient.

1. $\frac{1}{3} \div 2$ $\frac{1}{6}$
2. $\frac{1}{7} \div 7$ $\frac{1}{49}$
3. $\frac{1}{2} \div 8$ $\frac{1}{16}$
4. $\frac{1}{8} \div 2$
5. $7 \div \frac{1}{2}$
6. $25 \div \frac{1}{6}$

7. Mr. Holms had $\frac{1}{5}$ of a carton of orange juice left. He used equal amounts of the leftover juice for two servings. What fraction of the whole carton of juice did he use for each serving?

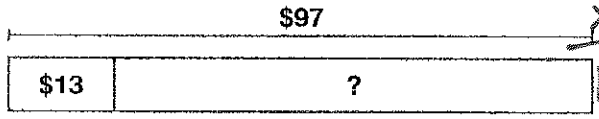
$\frac{1}{5} \div 2$
$\frac{1}{5} \times \frac{1}{2} = \frac{1}{10}$

Set E pages 487–492

Helen has $97 in quarters and half-dollars combined. She has $13 in quarters. How many half-dollars does she have?

What is the hidden question or questions?

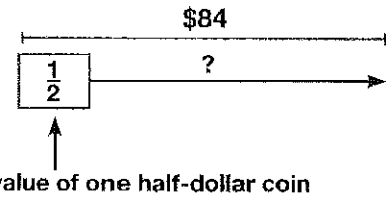
How much does Helen have in half-dollars?



25
×.50
12.50

$97 − $13 = $84

How many $\frac{1}{2}$ dollars are in $84?



$$\$84 \div \frac{1}{2} = 84 \times \frac{2}{1} = 168$$

Helen has 168 half-dollars.

Remember to answer the hidden question or questions first.

1. Ana was in a charity walk. She raised $0.25 for each $\frac{1}{2}$ mile that she walked. The first day, Ana walked 11 miles. The second day, she walked 14 miles. How much money did Ana raise?

$12.50

2. In Problem 1, write and solve any hidden question or questions that you need to answer first.

3. Leo has a store coupon for $0.40 off and another coupon for $0.75 off. He buys a carton of juice for $4.19 and a carton of milk for $2.89. What is his total cost after using the coupons?

.75
+.40
$1.15

4.19
+2.89
7.08
−1.15
5.93

Name _____

TOPIC 9

Test

1. If the diameter of a tree trunk is growing $\frac{1}{4}$ inch each year, how many years will it take for the diameter to grow 8 inches?

   A 2 years
   B 8 years
   C 24 years
   D 32 years

2. Samantha wrote three products equal to $\frac{7}{8}$. Which of the following did she **NOT** write?

   A $\frac{6}{8} \times 1$
   B $\frac{7}{8} \times 1$
   C $7 \times \frac{1}{8}$
   D $21 \times \frac{1}{24}$

3. Mrs. Webster wants to divide 6 pints of milk into $\frac{1}{3}$-pint-size servings. How many servings will she have?

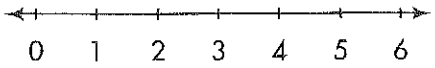
   $\frac{6}{1} \div \frac{1}{3}$

   $\frac{6}{1} \times \frac{3}{1} = 18$ servings

4. One-half of a cantaloupe was shared equally among 3 people. What fraction of the whole cantaloupe did each person get?

   A $\frac{1}{6}$ cantaloupe
   B $\frac{1}{5}$ cantaloupe
   C $\frac{1}{3}$ cantaloupe
   D $\frac{1}{2}$ cantaloupe

5. Raven is making pillows. Each pillow requires $\frac{1}{5}$ yard of fabric. Raven has 6 yards of fabric. Use the model to find the number of pillows Raven can make.

   A $\frac{1}{30}$ pillow
   B $\frac{7}{5}$ pillows
   C 11 pillows
   D 30 pillows

   $\frac{6}{1} \div \frac{1}{5}$

   $\frac{6}{1} \times \frac{5}{1} = 30$

6. A farmer owns 24 acres of land. He plans to use 6 acres for an entrance into the farm and divide the remaining land into $\frac{1}{3}$-acre lots. How many $\frac{1}{3}$-acre lots will he have?

   A 6 lots
   B 18 lots
   C 54 lots
   D 72 lots

   $18 \div \frac{1}{3}$

   $\frac{18}{1} \times \frac{3}{1} = 54$ lots

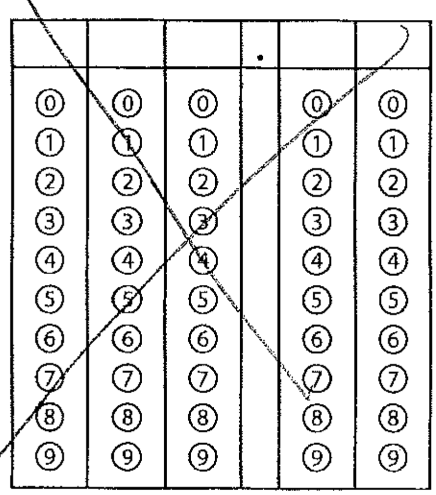
7. Jason spends $\frac{1}{3}$ of each day sleeping. What is the total number of days that Jason spends awake in 1 week?

8. Gus bought $\frac{2}{3}$ pound of turkey and $\frac{1}{4}$ pound of ham. The turkey cost \$9 per pound, and the ham cost \$7 per pound. In all, how much did Gus spend?

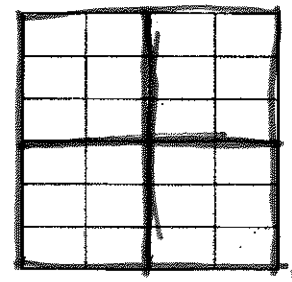
A \$1.75 **C** \$7.75

B \$6 **D** \$16

9. Tracy took a quiz containing 12 items. If she answered $\frac{5}{6}$ of the items correctly, how many items did she answer correctly?



10. Which number sentence is represented by the model that Jesse drew?



A $\frac{1}{6} \div 4 = \frac{1}{24}$ **C** $4 \div \frac{1}{4} = 16$

B $\frac{1}{24} \div 4 = \frac{1}{96}$ **D** $4 \div \frac{1}{6} = 24$

11. Three-quarters of a veggie pizza is left over. Mariah, Nick, and Kathryn are sharing the leftover pizza equally. What fraction of the original pizza does each person get?

A $\frac{1}{8}$ pizza **C** $\frac{1}{2}$ pizza

B $\frac{1}{4}$ pizza **D** Not here

12. The Marks family has two orchards. The orchard by the river is 6 acres in size The orchard on the hill is 9 acres in size. If $\frac{2}{3}$ of the river orchard has apple trees and $\frac{1}{3}$ of the hill orchard has apple trees, how many total acres are planted with apple trees?