



# Unit 6 Assessment Study Guide

① Multiply.

a.  $5.7 * 10^1 =$  \_\_\_\_\_

b.  $5.7 * 10^2 =$  \_\_\_\_\_

c.  $5.7 * 10^3 =$  \_\_\_\_\_

② Where did you place the decimal point in your answer to Problem 1c?  
How did you know to place it there?

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③ Divide.

a.  $12.8 \div 10^1 =$  \_\_\_\_\_

b.  $12.8 \div 10^2 =$  \_\_\_\_\_

c.  $12.8 \div 10^3 =$  \_\_\_\_\_

④ Where did you place the decimal point in your answer to Problem 3b?  
How did you know to place it there?

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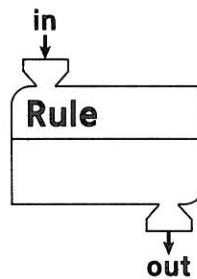
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## Unit 6 Assessment (continued)

- ⑤ Convert between centimeters (cm) and meters (m) to complete the “What’s My Rule?” table. Then write a rule using a power of 10 in exponential notation.



in (cm)	out (m)
100	1
250	2.5
25	
1	
48	0.48
	5.3

- ⑥ Jillian is making curtains for her room. She has fabric for each curtain that is 1.6 meters in length. She folds the bottom of the fabric up to make each curtain 8 centimeters shorter. How long is each curtain after Jillian has shortened them?

Answer: \_\_\_\_\_

- ⑦ Use an estimate to place the decimal point in each product.
- a.  $52.3 * 7.9 = 4\ 1\ 3\ 1\ 7$
- b.  $1.95 * 17.2 = 3\ 3\ 5\ 4$
- ⑧ Explain how you solved Problem 7b.

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**Unit 6 Assessment** (continued)

Solve.

$$\begin{array}{r} 9 \quad 12.6 \\ * \quad 8.7 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \quad 53.7 \\ * \quad 98.3 \\ \hline \end{array}$$

- 11 Explain how you solved Problem 9.

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- 12 Make an estimate. Then divide as if the dividend were a whole number.  
Use your estimate to place the decimal point in your answer.

$$8.46 \div 3 = ?$$

Estimate: \_\_\_\_\_

$$8.46 \div 3 = \underline{\hspace{2cm}}$$

- 13 Write an equivalent problem that has a whole-number divisor.  
Then solve the equivalent problem and complete the number sentence.

$$6.3 \div 0.9 = ?$$

Equivalent problem: \_\_\_\_\_

$$6.3 \div 0.9 = \underline{\hspace{2cm}}$$

**Unit 6 Assessment** (continued)

- 14 a. A rectangular one-story house covers an area of 3,700 square feet. The ceilings are 8 feet high. What is the volume of the interior of the house?

Number model: \_\_\_\_\_

Volume: \_\_\_\_\_ cubic feet

- b. The owners added a second floor to the house. The second floor is 50 feet long and 30 feet wide with ceilings that are 9 feet tall. What is the volume of the interior of the second floor?

Number model: \_\_\_\_\_

Volume: \_\_\_\_\_ cubic feet

- c. What is the total volume of the interior of the house?

Number model: \_\_\_\_\_

Volume: \_\_\_\_\_ cubic feet



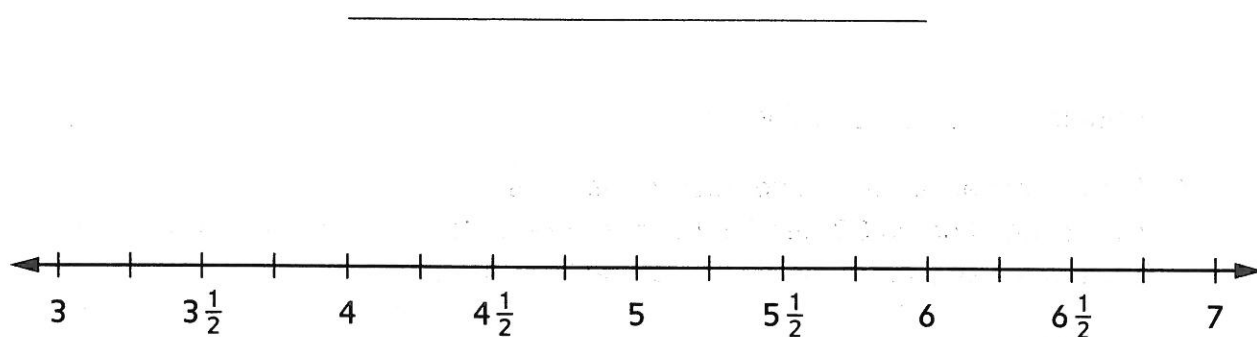
# Unit 6 Assessment (continued)

- 15 Travis helps out at his family's tree farm. He took careful measurements of 10 dogwood trees and recorded the heights below.

**Dogwood Tree Heights (ft)**

$6\frac{1}{4}$	$5\frac{1}{2}$	$4\frac{1}{4}$	$4\frac{3}{4}$	$5\frac{1}{2}$	$4\frac{3}{4}$	$3\frac{3}{4}$	$5\frac{1}{2}$	$4\frac{1}{2}$	$5\frac{1}{4}$
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- a. Complete the line plot using Travis's data. Remember to add a title and label.



- b. What is the most common height of the dogwood trees at the farm? \_\_\_\_\_
- c. What is the combined height of the 5 tallest trees?

Number model: \_\_\_\_\_

The combined height is \_\_\_\_\_ feet.

- d. What is the difference between the tallest and shortest trees?

Number model: \_\_\_\_\_

The difference in height is \_\_\_\_\_ feet.