NAME DATE TIME **Lesson 8-9**

Unit 8 Cumulative Assessment

For each story:

- Write a number model. Use a letter for what you want to find out. You may complete the diagram to help.
- Solve. Then write the number model with your answer to check your work.

(1) Laurie bought 7 boxes of pencils. There were 8 pencils per box.

How many pencils did she buy in all?

Boxes	Pencils in each box	Pencils in all

The letter _____ represents _____.

_____
(number model with letter)

Laurie bought _____.
(unit)

_____
(number model with answer)

Unit 8 Cumulative Assessment (continued)

② The art teacher shared 40 balls of yarn equally among the 10 children in the art club. How many balls of yarn did each child get?

Children	Balls of yarn per child	Balls of yarn in all

The letter _____ represents _____.

_____
(number model with letter)

Each child got _____.
(unit)

_____
(number model with answer)

③ Fill in the blanks.

a. 7 × _____ = 28

b. _____ = 8 × 7

c. _____ × 9 = 27

d. 42 = _____ × 7

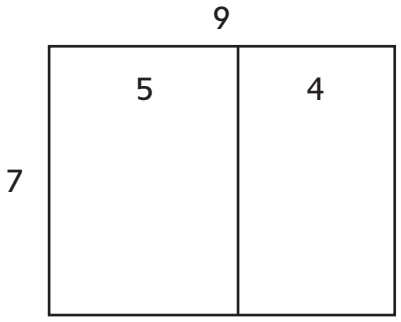
e. If 9 × _____ = 36, then 36 ÷ 9 = _____.

f. If _____ × 7 = 63, then 63 ÷ 7 = _____.

g. If 8 × _____ = 72, then 72 ÷ _____ = 8.

Unit 8 Cumulative Assessment (continued)

④ A.J. used the break-apart strategy to solve 7 × 9 by breaking 9 into the easier numbers 5 and 4. See her picture below.



Use A.J.'s easier numbers and drawing to write number models that she can use to help solve 7 × 9.

7 × 9 = _____

⑤ Fill in the blanks.

a. 9 ÷ _____ = 3

b. 25 ÷ 5 = _____

c. _____ ÷ 4 = 4

d. 49 ÷ 7 = _____

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Unit 8 Cumulative Assessment (continued)

⑥ Nathan has 5 bags of marbles.
Each bag has 4 yellow marbles and 6 red marbles.

How many marbles does Nathan have in all?

The letter *M* represents the number of marbles that Nathan has.

a. Underline the number model that fits the story.

$5 \times 4 + 6 = M$ $5 \times (4 + 6) = M$ $(5 + 4) \times 6 = M$

b. Solve the number story. You may draw a picture to help.

Answer: _____
(unit)

c. Write the number model with your answer to check your work.

_____

Unit 8 Cumulative Assessment (continued)

⑦ Cross out the names that do not belong.

Add at least two more names with parentheses that belong in the name-collection box.

18

$(3 \times 4) + 6$ $3 \times (4 + 6)$

$(64 \div 8) + 10$ $(18 + 8) \times 0$

$3 \times (36 \div 6)$

⑧ For each problem, make an estimate and solve. Check to make sure your answer makes sense.

Unit

a. Estimate: _____

$$\begin{array}{r} 539 \\ +358 \\ \hline \end{array}$$

b. Estimate: _____

$847 - 648 =$ _____

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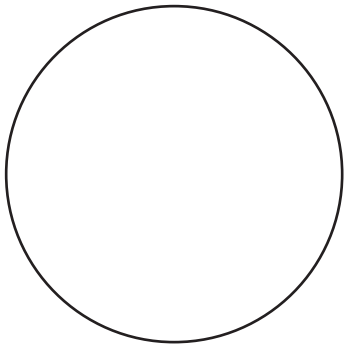
Unit 8 Cumulative Assessment (continued)

⑨ Partition the circle into 8 equal parts. Label each part.



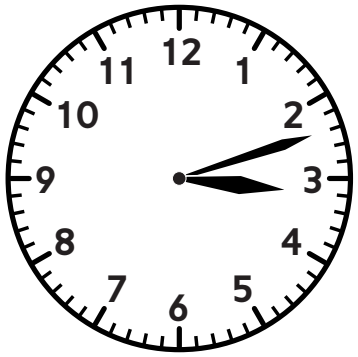
Shade $\frac{3}{4}$ of the circle.

Write two fractions that name the **unshaded** part of the circle.

_____ _____

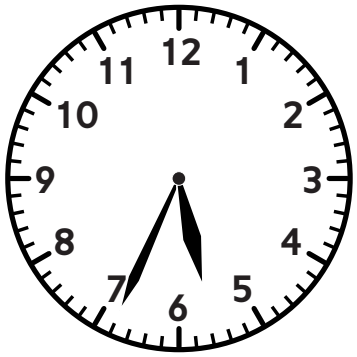
⑩ Write the time shown on the clocks below.

a.



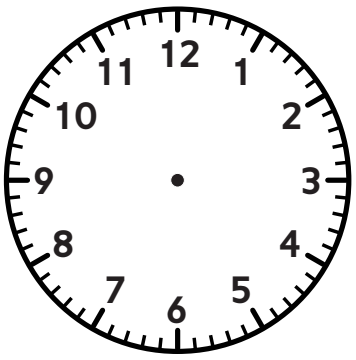
_____

b.



_____

c. Draw the hour and minute hands to show the time 15 minutes before 9:27.



What time does the clock show? _____

Unit 8 Cumulative Assessment (continued)

(11) Frank practiced his drums for 50 minutes.

He started playing at 4:18 P.M. What time did he finish?

He finished at _____ P.M.

(12) Ahmed has 900 milliliters (mL) of water in his watering can.
One jar holds 379 mL of water and the other holds 483 mL of water.
How much water does Ahmed need to fill both jars?

a. Estimate: _____

Answer: _____
(unit)

b. Does Ahmed have enough water to fill both jars? _____

Did you need to find an exact answer to decide whether Ahmed has enough water? Explain.

_____

_____

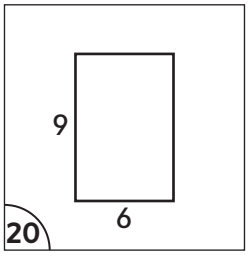
_____

_____

_____

Unit 8 Cumulative Assessment (continued)

(13) You draw this card in *The Area and Perimeter Game:*



a. Find the area and the perimeter.

Area: _____ square units

Perimeter: _____ units

b. Explain how you found the area.

_____

_____

(14) Addie wants to put a cloth rug in her dollhouse.
The area she wants to cover is 36 square inches.
If Addie wants a square rug, how long and how wide should she cut the cloth?

Draw a picture of the rug and label the side lengths.

The rug should be cut _____ (unit) long and

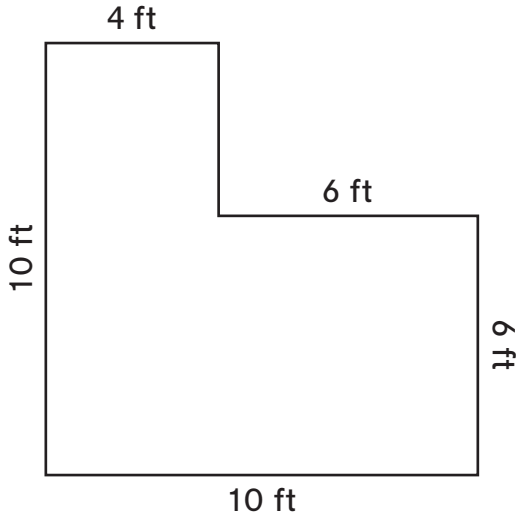
_____ (unit) wide.

What is the perimeter of the rug? _____ (unit)

Unit 8 Cumulative Assessment (continued)

⑮ The third-grade class is figuring out the area of the floor in the reading space.

Here is a sketch of the reading space:



Draw a line to make two smaller rectangles you can use to find the area.

Show your work. Write the number models you use.

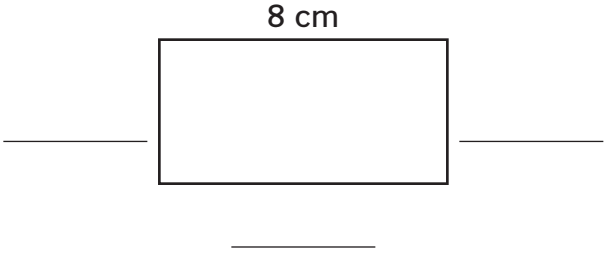
Number models: _____

_____

The area of the reading space is _____.
(unit)

⑯ The perimeter of this rectangle is 24 centimeters.

Label the missing side lengths.

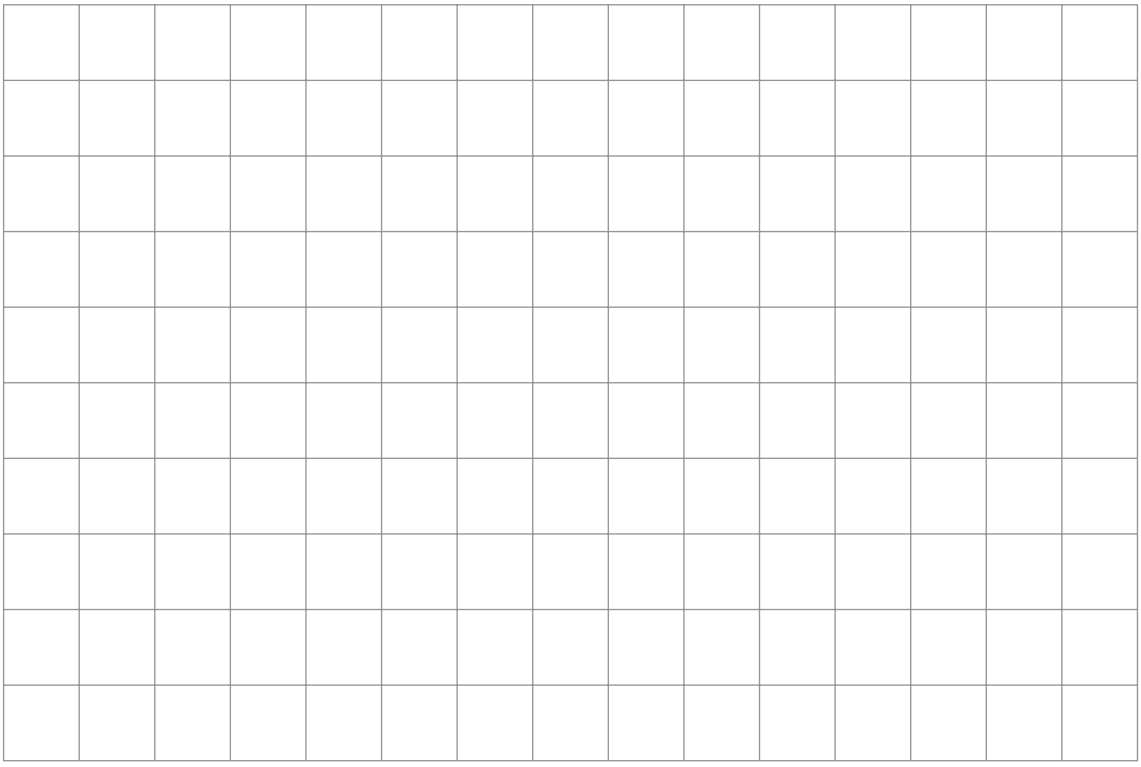


NAME DATE TIME **Lesson 8-9**

Unit 8 Cumulative Assessment (continued)

(17) **a.** Draw a rectangle with a perimeter of 16 centimeters. Then draw a different rectangle with the same perimeter.

Label your rectangles A and B.



☐ = 1 square cm

b. Explain how you know the perimeters for Rectangle A and Rectangle B are 16 centimeters.

_____

_____

_____

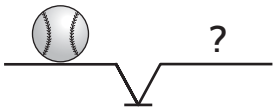
_____

c. What is the area of Rectangle A? _____ (unit)

d. What is the area of Rectangle B? _____ (unit)

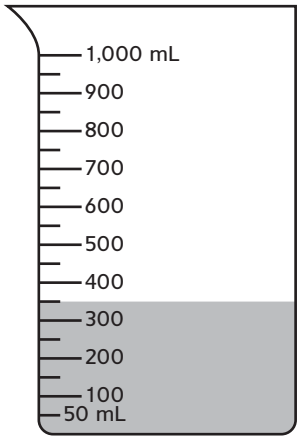
Unit 8 Cumulative Assessment (continued)

18 The mass of a baseball is 142 grams.



Greg has one 100-gram mass, one 50-gram mass, five 10-gram masses, five 5-gram masses, and five 1-gram masses. What masses could he use to balance the baseball?

19 The 1-liter beaker at the right has 350 milliliters of water.
Imani wants to have a full liter of water.
How much more water does she need to add?



She needs _____ more milliliters of water to make 1 liter.

20 Tony said $\frac{3}{4}$ of Rectangle A is equal to $\frac{3}{4}$ of Rectangle B.

Erin said $\frac{3}{4}$ of Rectangle A is not equal to $\frac{3}{4}$ of Rectangle B.

With whom do you agree? Explain.