



Additional Practice Answer Keys

Lesson 6 - 1

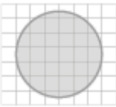
Name _____

Another Look!
You can find the area of the rectangle below by counting the number of unit squares that cover it.

 Eight unit squares cover the rectangle.
So, the area of the rectangle is 8 square units.

 Two unit squares cover the triangle.
So, the area of the triangle is 2 square units.


Sometimes you need to estimate area. You can combine partially filled squares to approximate full squares.


 About 28 unit squares cover the circle.
So, the area of the circle is about 28 square units.

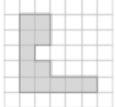
Area is the number of unit squares used to cover a region with no gaps or overlaps.


Additional Practice 6-1
Cover Regions

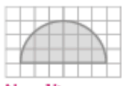
In 1–6, count to find the area of the shapes. Tell if the area is an estimate.


1. 
About 7 square units; Estimate

2. 
4 square units

3. 
12 square units

4. 
9 square units

5. 
About 14 square units; Estimate

6. 
15 square units

In 7–9, use the diagram at the right.

Athletic Field

Soccer	Baseball
Tennis	Not Used


7. What is the area of the soccer section of the field?
18 square units

8. What is the area of the field that is NOT being used?
14 square units

9. How many square units of the field are being used?
36 square units

10. Reasoning A bookstore has a sale. When customers pay for 2 books, they get another book free. If Pat pays for a box of 16 books, how many books does he get for free? How many books does Pat now have? Write division and addition equations to show how the quantities are related.
8 free books; 24 books in all; Sample answer: $16 \div 2 = 8$; $8 + 16 = 24$

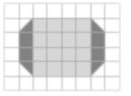
11. Higher Order Thinking Cora makes this design with square and triangular tiles. What is the area of the design? How did you calculate your answer?



The area is 56 square units. I counted 52 full squares. Then I counted 8 triangles, which are equal to 4 square units; $52 + 4 = 56$.

Assessment Practice

12. Tyler draws this shape on grid paper. What is the area of the shape?



☐ A 21 square units
☒ B 22 square units
☐ C 23 square units
☐ D 24 square units

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Lesson 6 - 2

ADDITIONAL PRACTICE

LEVELED ASSIGNMENT



ITEMS 1–5, 7



ITEMS 1–2, 4–7



ITEMS 1–4, 6–7

Name _____

Additional Practice 6-2
Area: Non-Standard Units

Another Look!
A unit square is a square with sides that are each 1 unit long.
Unit squares can be different sizes. The size of the unit square you use determines the area of a figure.

You can measure area by counting the unit squares that cover a figure.

= 1 square unit
There are 12 unit squares.
The area of this figure is 12 square units.

= 1 square unit
There are 48 unit squares.
The area of this figure is 48 square units.

In 1 and 2, draw unit squares to cover the figures and find the area. Use the unit squares shown.

1. = 1 square unit
4 square units

2. = 1 square unit
36 square units

= 1 square unit
16 square units

= 1 square unit
4 square units

Remember to look at the size of the unit squares that are used for each figure.

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3. Be Precise Inez finds that the area of this figure is 9 square units. Draw unit squares to cover this figure.

Sample drawing shown.

4. Vocabulary Fill in the blanks: Yasmeen can cover a figure with 7 rows of 8 unit squares to find the figure's area.

5. Number Sense Paula is making gift bags for each of her 5 friends. Each bag will have 6 markers. How many markers will Paula need? Skip count by 6s to find the answer. Then write a multiplication equation to represent the problem.
30 markers; $5 \times 6 = 30$

6. Higher Order Thinking Helen makes the rectangle on the right from tiles. Each tile is 1 unit square. Helen says the white tiles cover more area than the black tiles. Do you agree? Explain.
No; Sample answer: There are 10 black tiles, so they cover an area of 10 square units. There are 5 white tiles, so they cover an area of 5 square units; $10 > 5$.

7. Rick used the smaller unit square and found that the area of this shape is 16 square units. If he used the larger unit square, what would the area of the shape be?

= 1 square unit

= 1 square unit

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ADDITIONAL PRACTICE

LEVELED ASSIGNMENT



ITEMS 1–2, 5–8, 10, 12



ITEMS 3–5, 7–9, 11–12



ITEMS 4–8, 10–12

Name _____

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Additional Practice 6-3

Area: Standard Units

Another Look!
Count how many unit squares cover this figure.

10 unit squares cover the figure.
Each unit square equals 1 square centimeter.
The area of the figure is 10 square centimeters.

You can use standard units of length to help measure area.

In 1–6, each unit square represents a standard unit. Count the shaded unit squares. Then write the area.

- 15 unit squares; 15 square centimeters
- 20 unit squares; 20 square feet
- 25 unit squares; 25 square meters
- 30 unit squares; 30 square meters
- 35 unit squares; 35 square centimeters
- 40 unit squares; 40 square inches

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In 7 and 8, use the diagram at the right.

7. **Be Precise** What is the area of Tom's photo? Explain how you know which units to use.
24 square units; Sample answer: The photos are measured in inches, so the area of Tom's photo is 24 square inches.

8. What is the area in square inches of all the photos combined? Explain.
83 square inches; Sample answer: I added the areas of all three photos: $35 + 24 + 24 = 83$ square inches.

9. Is the area of a desk more likely to be 8 square feet or 8 square inches? Explain.
8 square feet; 8 square inches is too small for a desk.

10. Michele has 5 coins worth \$0.75 in all. What coins does she have?
Sample answer: Michele has 2 quarters, 2 dimes, and 1 nickel.

11. **Higher Order Thinking** Sam made the shape at the right from colored tiles. What is the area of the shape? Explain how you found your answer.
18 square inches; Sample answer: I counted 12 whole squares and 12 half squares. Twelve half squares is the same as 6 whole squares, so $12 + 6 = 18$.

Assessment Practice

12. Each of the unit squares in Shapes A–C represent 1 square meter. Select numbers to tell the area of each shape.

1 2 4 6 7 8

Shape A: 2, 4 square meters
Shape B: 2, 8 square meters
Shape C: 2, 4 square meters

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Lesson 6 - 4

ADDITIONAL PRACTICE

LEVELED ASSIGNMENT



ITEMS 1–2, 4, 7–8, 10



ITEMS 2–3, 5, 8–10



ITEMS 3–4, 6, 8–10

Name _____

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Additional Practice 6-4

Area of Squares and Rectangles

Another Look!
What is the area of Rectangle A? What is the length of Rectangle B?

Rectangle A: 40 square feet
Rectangle B: 20 square feet

A. You can count the number of unit squares in Rectangle A to find its area. There are 40 unit squares. Each unit square is 1 square foot.
You also can count the number of rows and multiply that number by the number of squares in each row.
 $5 \times 8 = 40$ square feet

B. The area of Rectangle B is 20 square feet, and the width is 5 feet.
 $20 \div 5 = ?$
You can use division to find the length of Rectangle B.
 $20 \div 5 = 4$ feet

In 1–3, find the area.

- 18 square meters
- 24 square inches
- 24 square centimeters

In 4–6, find the missing length of one side. Use grid paper to help.

- 9 ft
- 8 centimeters
- 6 m

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7. **Number Sense** Rachel's family went on a car trip. They traveled 68 miles the first day. They traveled 10 fewer miles the second day. They traveled 85 miles the third day. How many miles did they travel?
211 miles

8. **Critique Reasoning** Diane says that the area of this shape is 32 square inches, because $4 \times 8 = 32$. Do you agree? Explain.
Agree; Sample answer: If the shape were drawn on grid paper, there would be 4 rows of 8 squares, which is 32 square inches.

9. **Higher Order Thinking** Rubin drew this diagram of his garden. How can you divide the shape to find the area? What is the area of the garden?
Sample answer: I divided the shape into a square and a rectangle. Then I found the area of each shape and added the two areas: $4 \times 4 = 16$; $4 \times 10 = 40$; $16 + 40 = 56$ square meters.

Assessment Practice

10. Jerry builds shelves. Two of his shelves are shown. Select all the true statements about Jerry's shelves.

Shelf A: 4 m by 4 m
Shelf B: 5 ft by 6 ft

1. You can find the area of Shelf A by counting the unit squares. ☒

2. You can find the area of Shelf B by multiplying the side lengths. ☒

3. The areas of Shelves A and B are equivalent. ☐

4. The area of Shelf A is 30 square feet. ☐

5. The area of Shelf B is 30 square feet. ☐

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Lesson 6 - 5

ADDITIONAL PRACTICE

LEVELED ASSIGNMENT

I

ITEMS 1–2, 5–6, 9

O

ITEMS 2–3, 5, 7, 9

A

ITEMS 3–4, 7–9

Name _____

Additional Practice 6-5
Apply Properties:
Area and the
Distributive Property

Another Look!
You can use the Distributive Property to break an area into smaller rectangles to find more familiar facts to multiply.

You can separate a rectangle into two smaller rectangles with the same total area.

You can write the multiplication fact that represents the area of the large rectangle.

$4 \times 5 = 20$

You can write the multiplication facts that represent the area of each of the smaller rectangles.

$4 \times 5 = 4 \times (3 + 2)$
 $4 \times 5 = (4 \times 3) + (4 \times 2)$
 $4 \times 5 = 12 + 8 = 20$

In 1–4, complete the equations that represent the picture.

1. $3 \times 5 = 3 \times (3 + 2)$
 $3 \times 5 = (3 \times 3) + (3 \times 2)$
 $3 \times 5 = 9 + 6 = 15$

2. $4 \times 7 = 4 \times (3 + 4)$
 $4 \times 7 = (4 \times 3) + (4 \times 4)$
 $4 \times 7 = 12 + 16 = 28$

3. $3 \times 6 = 3 \times (2 + 4)$
 $3 \times 6 = (3 \times 2) + (3 \times 4)$
 $3 \times 6 = 6 + 12 = 18$

4. $5 \times 6 = 5 \times (3 + 3)$
 $5 \times 6 = (5 \times 3) + (5 \times 3)$
 $5 \times 6 = 15 + 15 = 30$

The area of the large rectangles are equal to the sum of the areas of the smaller rectangles.

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5. Tina divided the rectangle at the right into two smaller parts. Show another way to divide the rectangle into two smaller parts. Write the equation you could use to find the area of the two smaller rectangles.

Check students' drawings; Sample answer:
 $4 \times 8 = 4 \times (5 + 3) = (4 \times 5) + (4 \times 3) = 20 + 12$

6. Lee wants to place 48 photographs on a wall at school. He puts the photographs into 8 equal rows. How many photographs are in each row?
6 photographs

7. Higher Order Thinking George had 1 sheet of paper. He cuts it into 6 inches by 5 inches, and 3 inches by 6 inches. What were the dimensions and total area of his original sheet of paper? Explain.
6 inches by 8 inches; 48 square inches; Sample answer:
 $(6 \times 5) + (6 \times 3) = 6 \times (5 + 3) = 6 \times 8 = 48$

8. Use Structure Darren has a piece of wood that is 7 inches by 8 inches. Explain how he could divide this large rectangle into two smaller rectangles.
Sample answer: He could divide the large rectangle into two smaller rectangles that are 7 x 3 inches and 7 x 5 inches.

Assessment Practice

9. Which equation represents the total area of the shapes?

A $3 \times 10 = 3 \times (3 + 6) = (3 \times 3) + (3 \times 6)$
B $3 \times 9 = 3 \times (4 + 5) = (3 \times 4) + (3 \times 5)$
C $3 \times 9 = 3 \times (3 + 6) = (3 \times 3) + (3 \times 6)$
D $3 \times 9 = 3 \times (2 + 7) = (3 \times 2) + (3 \times 7)$

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Lesson 6 - 6

ADDITIONAL PRACTICE

LEVELED ASSIGNMENT



ITEMS 1–2, 4, 6–7, 9



ITEMS 1–3, 5, 8–9



ITEMS 3–5, 7–9

Name _____

Another Look!
How can you find the area of the irregular shape below?

You can count unit squares, or divide the shape into rectangles.

Place the shape on grid paper. Then you can count unit squares.

The area of the irregular shape is 26 square inches.

You can divide the shape into rectangles. Find the area of each rectangle. Then add the areas.

A: $4 \times 3 = 12$
B: $2 \times 2 = 4$
 $12 + 4 = 16$

The area of the irregular shape is 16 square inches.

Additional Practice 6-6
Apply Properties:
Area of Irregular Shapes

In 1–4, find the area of each irregular shape. Use grid paper to help.

- 22 square inches
- 13 square feet
- 23 square centimeters
- 19 square centimeters

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5. Reasoning Tony made this diagram of his vegetable garden. What is the total area? Explain your reasoning.

124 square feet; Sample answer: I divided the diagram into three rectangles, found the area of each rectangle, and then added the three areas: $6 \times 10 = 60$; $8 \times 4 = 32$; $8 \times 4 = 32$; $60 + 32 + 32 = 124$ square feet.

6. enVision™ STEM Mr. Thomson wants to protect his garage by installing a flood barrier. He connects 2 barriers side by side. Each barrier is 9 feet long by 2 feet high. What is the combined area of the barriers?

36 square feet

7. Number Sense Hadori made this solid figure by paper folding. What is the name of the figure she made? How many faces, edges, and vertices does it have?

A cube (or rectangular prism); 6 faces, 12 edges, 8 vertices

8. Higher Order Thinking Jordan made this design from three pieces of square-shaped cloth. What is the total area of the design Jordan made? Explain how you found your answer.

116 square centimeters; Sample answer: I found the area of each of the squares by multiplying each side by itself: $4 \times 4 = 16$; $6 \times 6 = 36$; $8 \times 8 = 64$. Then I added the areas of the squares to find the total area of the design: $16 + 36 + 64 = 116$.

Assessment Practice

9. Daniel drew the figure at the right. Draw lines to show how you can divide the figure to find the area. Then select the correct area for the figure at the right.

☐ A 25 square centimeters
☐ B 50 square centimeters
☐ C 75 square centimeters
☒ D 100 square centimeters

Sample answer shown.

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