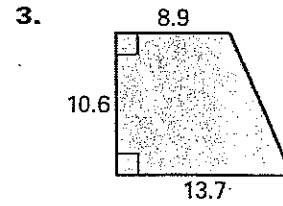
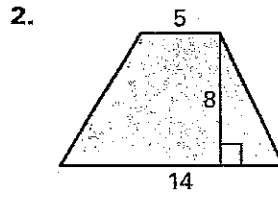
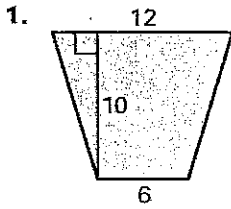
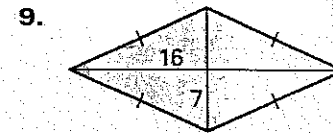
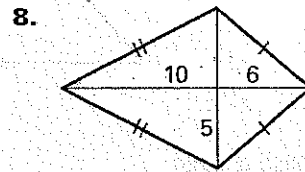
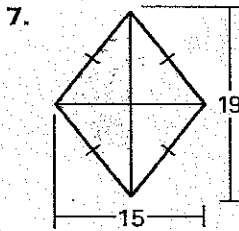
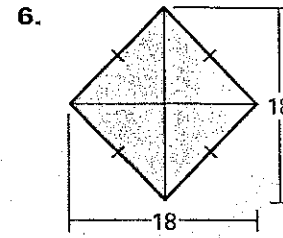
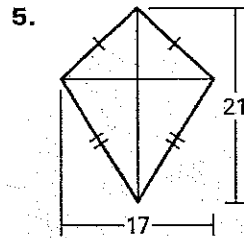
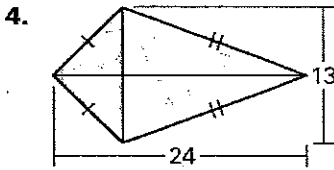


**LESSON 11.2** **Practice B**  
For use with pages 729–736

Find the area of the trapezoid.

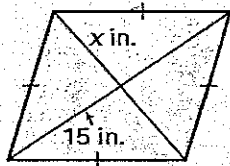


Find the area of the rhombus or kite.

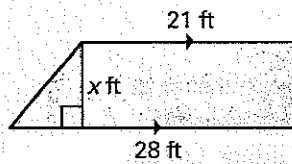


Use the given information to find the value of  $x$ .

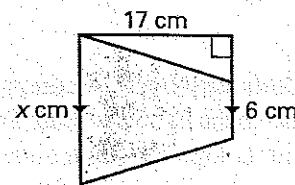
10. Area =  $330 \text{ in.}^2$



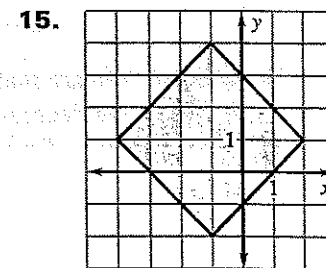
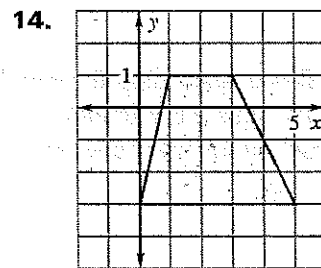
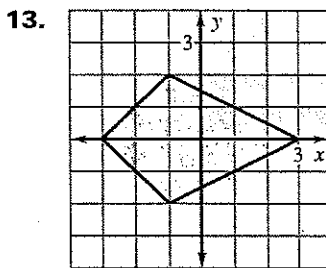
11. Area =  $196 \text{ ft}^2$



12. Area =  $187 \text{ cm}^2$

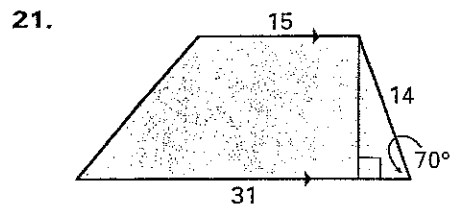
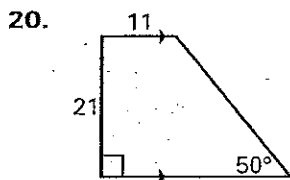
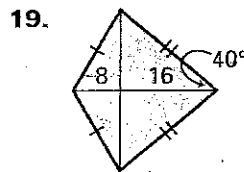
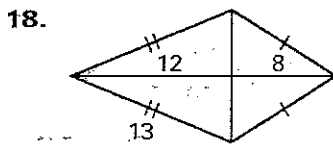
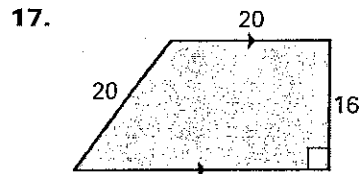
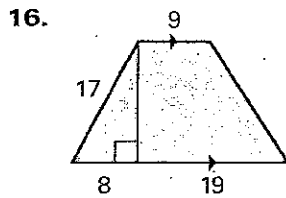


Find the area of the figure.

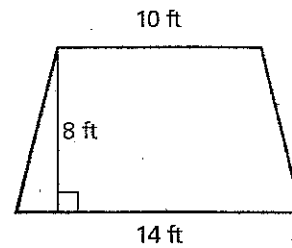


**LESSON 11.2** **Practice B** *continued*  
For use with pages 729–736

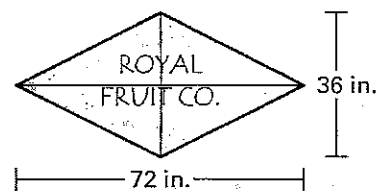
**Find the area of the polygon.**



22. **Washing Windows** You are going to wash a large glass window in the shape of a trapezoid. The lengths of the bases of the window are 10 feet and 14 feet. The height is 8 feet. You can wash 6 square feet of the window in 1 minute. How long will it take you to wash the entire window?



23. **Company Logo** A company has a logo that is in the shape of a rhombus. The company wants to put its logo on a sign outside the building. On the sign, the diagonals of the rhombus will be 72 and 36 inches long. Find the area of the logo.



24. **Flower Decoration** You are making a flower decoration for your house in the shape of a kite. The area of the decoration is 450 square centimeters and the length of one diagonal is 25 centimeters. Find the length of the other diagonal.



## Lesson 11.1, continued

26. First, use Heron's Formula with  $s = 4 + 2\sqrt{2}$ .

$$\begin{aligned} A &= \sqrt{(4 + 2\sqrt{2})(2\sqrt{2})(2\sqrt{2})(4 - 2\sqrt{2})} \\ &= \sqrt{(4 + 2\sqrt{2})(4 - 2\sqrt{2})(2\sqrt{2})^2} \\ &= \sqrt{(16 - 8)(8)} = \sqrt{64} = 8 \end{aligned}$$

Now use the formula for the area of a triangle.

$$A = \frac{1}{2}bh = \frac{1}{2}(4\sqrt{2})(2\sqrt{2}) = 8.$$

The areas are equal.

### Study Guide

- 126 square units
- 220 square units
- 24 square units
- $x = 7$
- 4930 ft<sup>2</sup>

### Problem Solving Workshop:

#### Worked Out Example

- 840 in.<sup>2</sup>
- 26 in.<sup>2</sup>

#### Challenge Practice

- 6 ft<sup>2</sup>
- about 185.7 cm<sup>2</sup>
- about 605.9 in.<sup>2</sup>
- To find the area of  $\triangle ABC$ , subtract the area of  $\triangle CBD$  from the area of  $\triangle ABD$ .

Area of  $\triangle ABC$  = Area of  $\triangle ABD$  - Area of  $\triangle CBD$

$$\begin{aligned} &= \frac{1}{2}(f + g)h - \frac{1}{2}gh \\ &= \frac{1}{2}fh + \frac{1}{2}gh - \frac{1}{2}gh \\ &= \frac{1}{2}fh, \text{ where } f \text{ is the base of} \\ &\quad \triangle ABC \end{aligned}$$

- 20 m<sup>2</sup>
- $90\sqrt{3} \approx 155.9$  ft<sup>2</sup>
- $130\sqrt{2} \approx 183.8$  yd<sup>2</sup>
- 11.5 units<sup>2</sup>
- The result is 0. This implies that the coordinates do not form a triangle and they are collinear.

## Lesson 11.2

### Teaching Guide

1. A trapezoid can be used to represent a parallelogram by duplicating the trapezoid and adjoining a pair of corresponding legs. The area of the trapezoid is half the area of the parallelogram. 2. A rhombus or a kite can be converted into a rectangle by cutting along the diagonals and rearranging the pieces to form a rectangle. The area of the rhombus or kite is equal to the area of the rectangle. 3. A rhombus that has equal diagonals is a square.

### Practice Level A

- 42 square units
- 20 square units
- 126 square units
- 32 square units
- 38.5 square units
- 96 square units
- 56 square units
- 90 square units
- 48 square units
- 10 m
- 2 yd
- 4 cm
- 10 square units
- 10.5 square units
- 12 square units
- 120 square units
- 300 square units
- 273 square units
- 210 square units
- 168 square units
- 238 square units
- \$42
- 1125 ft<sup>2</sup>
- 18 in.

### Practice Level B

- 90 square units
- 76 square units
- 119.78 square units
- 156 square units
- 178.5 square units
- 162 square units
- 142.5 square units
- 80 square units
- 224 square units
- 11 in.
- 8 ft
- 16 cm
- 12 square units
- 14 square units
- 18 square units
- 270 square units
- 416 square units
- 100 square units
- 322.2143 square units
- 416.0215 square units
- 302.5810 square units
- 16 min
- 1296 in.<sup>2</sup>
- 36 cm

### Practice Level C

- 115.28 square units
- about 98.77 square units
- 1.045 square units
- 60 square units
- 65.2 square units
- 7.56 square units
- 4 m
- 2 mi
- 20 ft
- 8 square units
- 22.5 square units
- 16 square units
- 7 m, 21 m
- 10 ft, 14 ft
- about 191.97 square units
- about 528.1 square units
- about 669.4 square units
- 65 square units
- about 92.4 square units
- 30 square units
- Yes, you will have enough material because a square yard contains 1296 in.<sup>2</sup> and you only need 1080 in.<sup>2</sup>.
- $55x^2$
- 1350 ft<sup>2</sup>

### Study Guide

- 96 square units
- 176 square units
- 16 in. and 48 in.
- 7 square units
- 18 square units

