Name _____ Core ____ Date _____

4 Chapter Review

Check It Out
Vocabulary Help
BigIdeasMath.com

Review Key Vocabulary

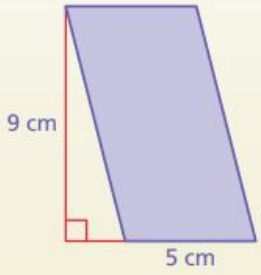
polygon, *p. 152*

composite figure, *p. 172*

Review Examples and Exercises

4.1 Areas of Parallelograms *(pp. 152–157)*

Find the area of the parallelogram.



$A = bh$ Write formula.

$= 5(9)$ Substitute 5 for b and 9 for h.

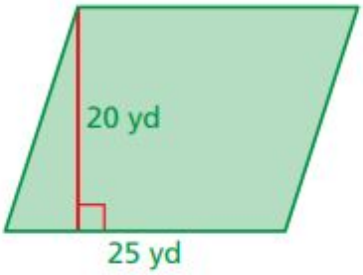
$= 45$ Multiply.

∴ The area of the parallelogram is 45 square centimeters.

Exercises

Find the area of the parallelogram.

1.



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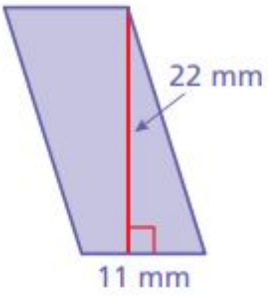
2.



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4.2 Areas of Triangles *(pp. 158–163)*

Find the area of the triangle.

$A = \frac{1}{2}bh$ Write formula.

$= \frac{1}{2}(10)(7)$ Substitute.

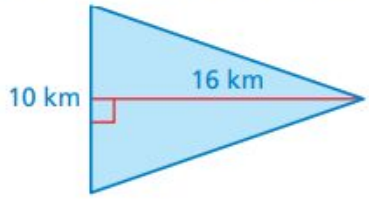
$= 35$ Multiply.

∴ The area of the triangle is 35 square miles.

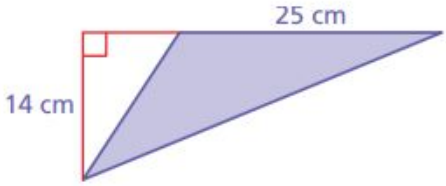
Exercises

Find the area of the triangle.

3.



4.



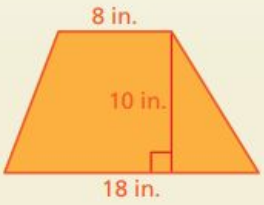
4.3 Areas of Trapezoids *(pp. 166–173)*

Find the area of the trapezoid.

$A = \frac{1}{2}h(b_1 + b_2)$ Write formula.

$= \frac{1}{2}(10)(8 + 18)$ Substitute.

$= \frac{1}{2}(10)(26) = 130$ Multiply.

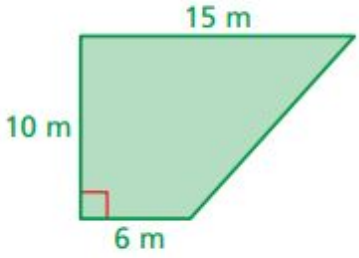


∴ The area of the trapezoid is 130 square inches.

Exercises

Find the area of the trapezoid.

5.



6.

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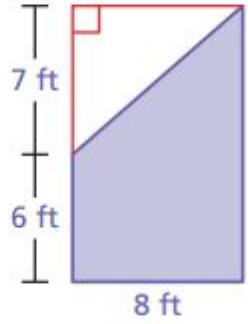
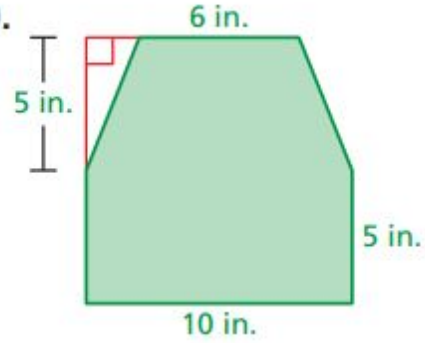
Find the area of the figure.

8.



10.



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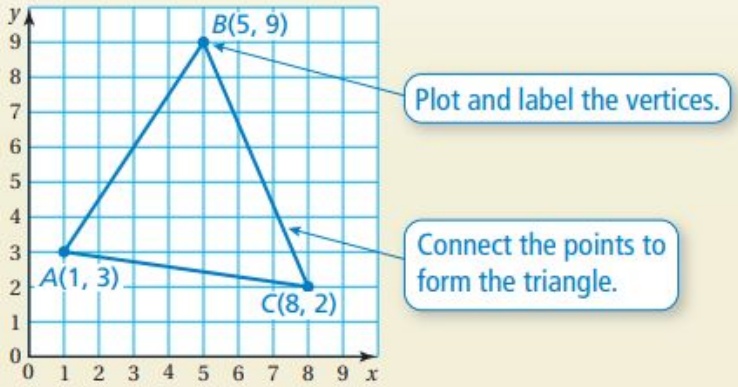
4.4 Polygons in the Coordinate Plane *(pp. 174–179)*

a. The vertices of a triangle are $A(1, 3)$, $B(5, 9)$, and $C(8, 2)$. Draw the triangle in a coordinate plane.



b. The vertices of a rectangle are $F(2, 6)$, $G(8, 6)$, $H(8, 1)$, and $J(2, 1)$. Draw the rectangle in a coordinate plane and find its perimeter.

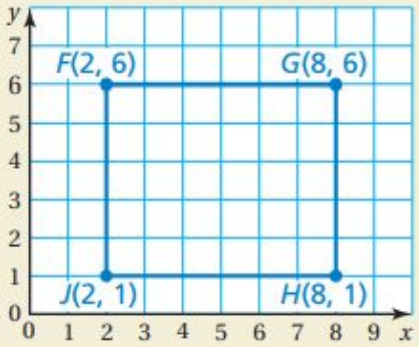
Draw the rectangle and use the vertices to find its dimensions.

The length is the horizontal distance between $F(2, 6)$ and $G(8, 6)$, which is the difference of the x-coordinates.

$$\text{length} = 8 - 2 = 6 \text{ units}$$

The width is the vertical distance between $G(8, 6)$ and $H(8, 1)$, which is the difference of the y-coordinates.

$$\text{width} = 6 - 1 = 5 \text{ units}$$



∴ So, the perimeter of the rectangle is $2(6) + 2(5) = 22$ units.

Exercises

Draw the polygon with the given vertices in a coordinate plane.

Do these on your grid. Label them 11 and 14.

11. $A(3, 2), B(4, 7), C(6, 0)$

14. $K\left(3, 3\frac{1}{2}\right), L(5, 7), M(8, 7), N\left(6, 3\frac{1}{2}\right)$

Find the perimeter and the area of the polygon with the given vertices.

15. $P(4, 3), Q(4, 7), R(9, 7), S(9, 3)$

Perimeter: _____ Area: _____

17. $W(11, 2), X(11, 8), Y(14, 8), Z(14, 2)$

Perimeter: _____ Area: _____