

Name: _____ Teacher: _____ Date: _____

Perimeter, Circumference, and Area

Guided Notes: STUDENT EDITION

VOCABULARY

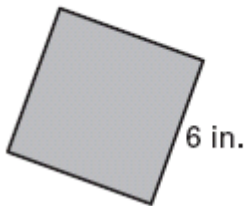
The amount of surface covered by a figure is its **area**.

Area of a Square: $\text{Area} = (\text{side})^2$

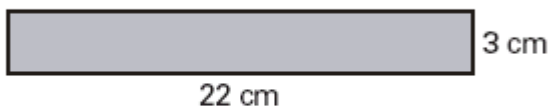
Area of a Rectangle: $\text{Area} = (\text{base})(\text{height})$

Find the Area of a Square and the Area of a Rectangle

- a. Find the area of the square.



- b. Find the area of the rectangle.



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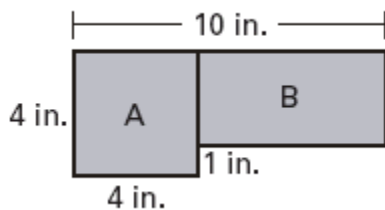
Find the Base of a Rectangle

The rectangle has an area of 132 square feet.
Find its base.



Find the Area of a Complex Polygon

Find the area of the polygon made up of rectangles.



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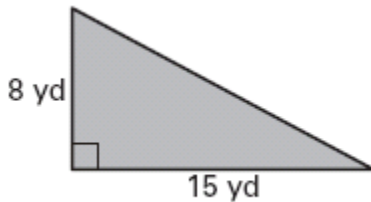
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The **height of a triangle** is the perpendicular segment from a vertex to the line containing the opposite side, called the **base of the triangle**.

Area of a Triangle: $\text{Area} = \frac{1}{2}(\text{base})(\text{height})$

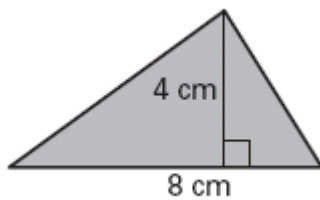
Find the Area of a Right Triangle

Find the area of the right triangle.



Find the Area of a Triangle

Find the area of the triangle.



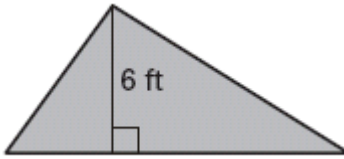
Find the Base of a Triangle

Find the base of the triangle, given that its area is 42 square feet.

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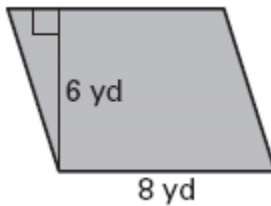
Either pair of parallel sides of a parallelogram are called the **bases of the parallelogram**. The shortest distance between the bases of a parallelogram is called the **height of a parallelogram**.

Area of a Parallelogram: $\text{Area} = (\text{base})(\text{height})$

Area of a Rhombus: $\text{Area} = \frac{1}{2}(\text{product of diagonals})$

Find the Area of a Parallelogram

Find the area of the parallelogram.



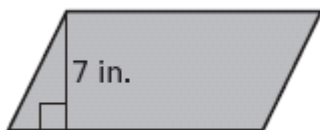
Find the Base of a Parallelogram

Find the base of the parallelogram given that its area is 105 square inches.

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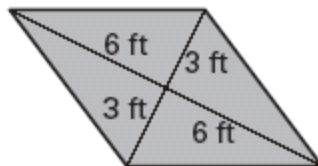
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Find the Area of a Rhombus

Find the area of the rhombus.



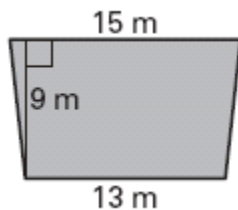
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The shortest distance between the bases of a trapezoid is the **height** of the trapezoid.

Area of a Trapezoid: $\text{Area} = \frac{1}{2}(\text{height})(\text{sum of bases})$

Find the Area of a Trapezoid

Find the area of the trapezoid.



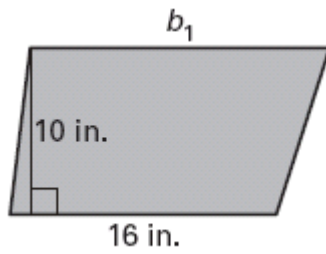
Use the Area of a Trapezoid

Given that the area of the trapezoid is 170 square inches, find b_1 .

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Area of a Circle: $\text{Area} = \pi(\text{radius})^2$

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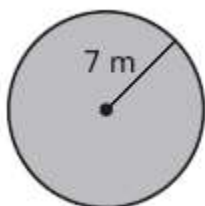
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Find the Circumference of a Circle

Find the circumference of the circle.

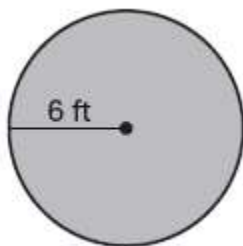
$$C = 2\pi r$$



Find the Area of the Circle

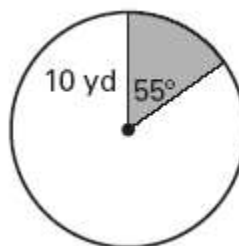
Find the area of a circle with a radius of 6 feet.

$$A = \pi r^2$$



Find the Area of a Sector

Find the area of the shaded sector.



First find the area of the circle.

Now find the area of the sector. Let x equal the area of the sector.

$$\frac{\text{Area of sector}}{\text{Area of entire circle}} = \frac{\text{Measure of central angle}}{\text{Measure of entire circle}}$$

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Cross product property