

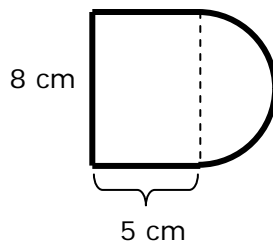
### Finding the Area of a Composite Figure

Flossville Park, Safety First Subtask 1: Cover the playground with rubber mulch.  
Windjammer Center, 3R's Subtask 2: Cover the floor of the gazebo.

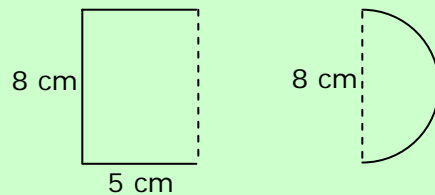
A **composite figure** is made up of several simple geometric figures such as triangles, rectangles, squares, circles, and semicircles.

To find the **area** of a composite figure, separate the figure into simpler shapes whose area can be found. Then add the areas together. Be sure that none of the simpler figures have overlapping areas.

**Example 1:** Find the area of the composite shape shown below.



First separate the composite shape into two simpler shapes, in this case a rectangle and a semicircle.



Then find the area of each figure.

$$A = lw$$

Rectangle:  $A = (8 \text{ cm})(5 \text{ cm})$

$$A = 40 \text{ cm}^2$$

The area of the rectangle is  $40 \text{ cm}^2$ .

$$A = \frac{1}{2} \pi r^2$$

Semicircle:  $A = \frac{1}{2} \pi (4 \text{ cm})^2$

$$A \approx 25.13 \text{ cm}^2$$

The area of the semicircle is about  $25.13 \text{ cm}^2$ .

Finally, add the areas of the simpler figures together to find the total area of the composite figure.

Area of rectangle + Area of semicircle

Composite shape:  $40 \text{ cm}^2 + 25.13 \text{ cm}^2$

$$65.13 \text{ cm}^2$$

The area of the composite shape is approximately  $65.13 \text{ cm}^2$ .