Lesson 20: Composite Area Problems

Classwork

Example 1

Find the composite area of the shaded region. Use $3.14$ for $π$.

Exercise 1

A yard is shown with the shaded section indicating grassy areas and the unshaded sections indicating paved areas. Find the area of the space covered with grass in units2.

Example 2

Find the area of the figure that consists of a rectangle with a semicircle on top. Use $3.14 $for $π$.

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Exercise 2

Find the area of the shaded region. Use$ 3.14$ for $π$.

**Example 3**

Find the area of the shaded region.

Redraw the figure separating the triangles; then, label the lengths discussing the calculations.

Exercise 3

Find the area of the shaded region. The figure is not drawn to scale.

Problem Set

1. ****Find the area of the shaded region. Use $3.14$ for$ π$.
2. ****The figure shows two semicircles. Find the area of the shaded region. Use $3.14$ for $π.$
3. ****The figure shows a semicircle and a square. Find the area of the shaded region. Use $3.14$ for $π.$
4. ****The figure shows two semicircles and a quarter of a circle. Find the area of the shaded region. Use $3.14$ for$ π$.
5. ****Jillian is making a paper flower motif for an art project. The flower she is making has four petals; each petal is formed by three semicircles as shown below. What is the area of the paper flower? Provide your answer in terms of $π$.
6. The figure is formed by five rectangles. Find the area of the unshaded rectangular region.
7. The smaller squares in the shaded region each have side lengths of $1.5 m$. Find the area of the shaded region.
8. ****Find the area of the shaded region.
	1. ****Find the area of the shaded region.
	2. Draw two ways the figure above can be divided in four equal parts.

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* 1. What is the area of one of the parts in (b)?
1. The figure is a rectangle made out of triangles. Find the area of the shaded region.
2. The figure consists of a right triangle and an eighth of a circle. Find the area of the shaded region. Use $\frac{22}{7}$ for $π.$