Name _____   Period _____   Date _____

Geometry :
Area and Volume A

1	**Example Stem:** The radius of a circle is 7.5 centimeters. Enter the area of the circle, in square centimeters. Round your answer to the nearest hundredth.
2	**Example Stem 1:** A circular table top has a radius of 3 feet. Enter the area, in square feet, of the table top. Round your answer to the nearest tenth.
3	**Example Stem 2:** Jill buys two circular pizzas. The small pizza has an 8-inch diameter. The medium pizza has a 12-inch diameter. How much greater, in square inches, is the area of the medium pizza than the small pizza? Round your answer to the nearest tenth.
4	**Example Stem:** The radius of a circle is 7 centimeters. Enter the circumference of the circle, in centimeters. Round your answer to the nearest hundredth.

G: Area and Volume A

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5	**Example Stem:** The circumference of a circle is 31.4 inches. Enter the radius of the circle, in inches. Round your answer to the nearest whole number.
6	**Example Stem 1:** A corner shelf has a radius of 10.5 inches and represents $\frac{1}{4}$ of a circle, as shown. Enter the area of the shelf, in square inches. Round your answer to the nearest hundredth.
7	**Example Stem 2:** The circumference of the circle is approximately 100.48 centimeters. The shaded region is $\frac{3}{10}$ of the whole circle. Enter the area of the shaded region, in square centimeters. Round your answer to the nearest hundredth.

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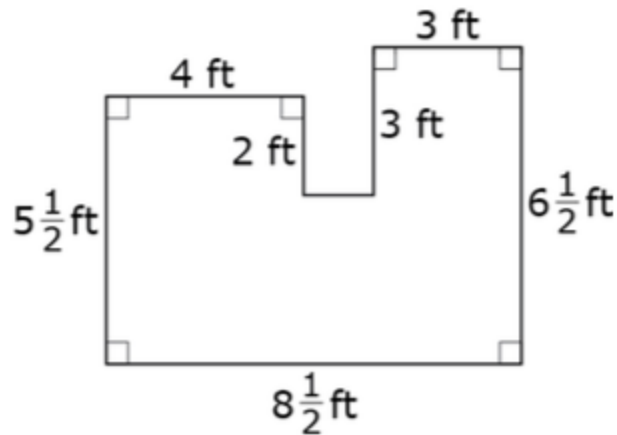**Example Stem 1:** This is the floor plan of Julie's bathroom. Julie needs to determine the area of the floor so she can order new tile.

3 ft

4 ft

3 ft

2 ft

$5\frac{1}{2}$ ft

$6\frac{1}{2}$ ft

$8\frac{1}{2}$ ft
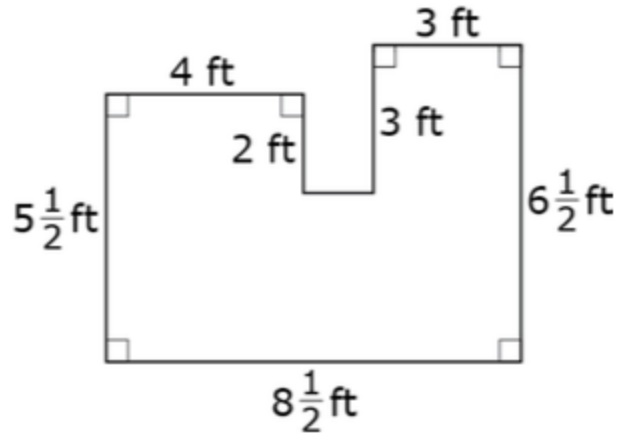
Enter the area, in square feet, of Julie's bathroom floor.

9

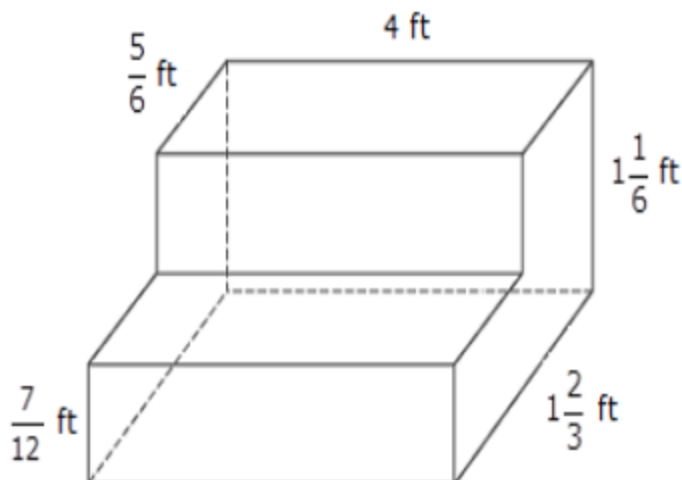**Example Stem 2:** The figure shown is created by joining three rectangles.

3 ft

4 ft

3 ft

2 ft

$5\frac{1}{2}$ ft

$6\frac{1}{2}$ ft

$8\frac{1}{2}$ ft

Enter the area of the figure, in square centimeters. Round to the nearest hundredth.

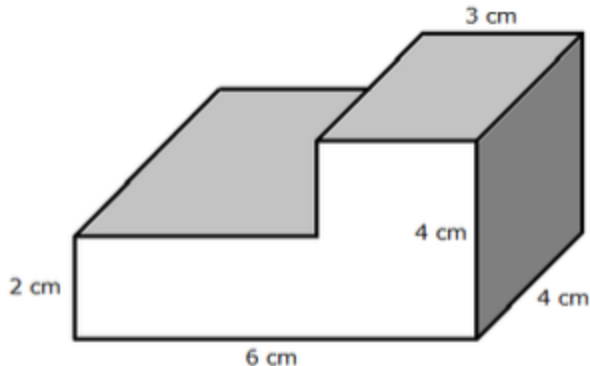G: Area and Volume A

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Example Stem 1: The figure shows a set of concrete stairs to be built.

4 ft

$\frac{5}{6}$ ft

$1\frac{1}{6}$ ft

$\frac{7}{12}$ ft

$1\frac{2}{3}$ ft

Enter the amount of concrete, in cubic feet, needed to build the stairs. Round your answer to the nearest hundredth.

11

Example Stem 2: The figure shown is created by joining two right rectangular prisms.
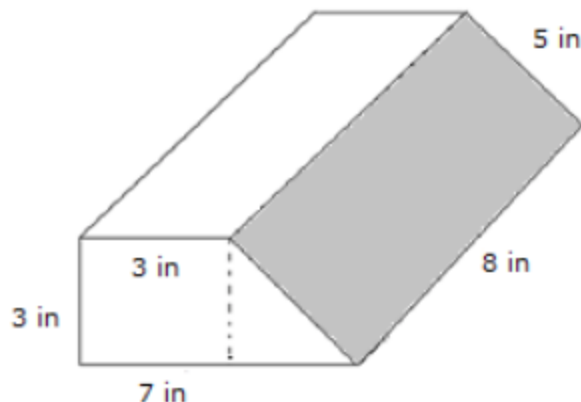
3 cm

4 cm

2 cm

4 cm

6 cm

Enter the volume of the figure, in cubic centimeters.

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Example Stem 3: The figure shows the dimensions for a package to be shipped.

5 in

3 in

8 in

3 in

7 in

Enter the minimum amount of wrapping paper, in square inches, needed to cover the package. Round your answer to the nearest whole inch.

13

Example Stem: This diagram of a rectangular city park was drawn using a scale factor of 1 centimeter to 20 meters.
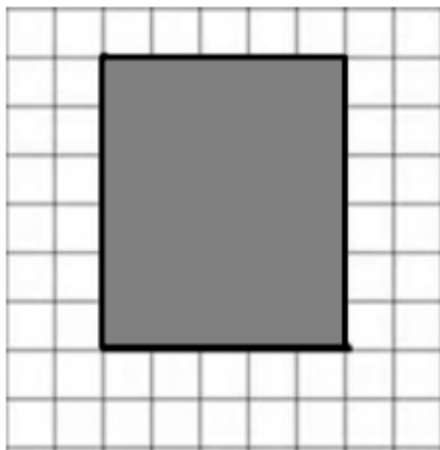
In the diagram shown, assume each square on the grid is 1 centimeter in length.
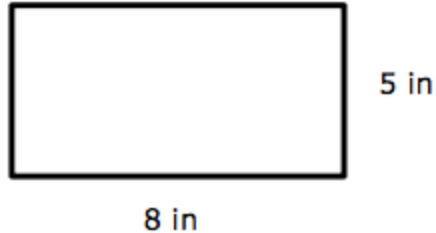
What is the area, in square meters, of the actual park on which this scale drawing is based?

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Example Stem: This scale drawing of a rectangular rug has dimensions 8 inches by 5 inches. The length of the longer side of the actual rug is 32 feet.

5 in

8 in

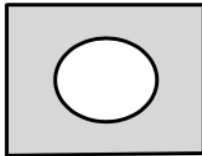Enter the area, in square feet, of the actual rug.

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CLAIM 2

Example Item 3C.1b (Grade 7)
Primary Target 3C (Content Domain G), Secondary Target 1F (CCSS 7.G.B), Tertiary Target 3G

Glenn saw the figure below and said,
"If I find the length (l), width (w), and radius (r), then the area (A) of the shaded region is $A = l \cdot w - \pi r^2$."

Which assumptions must Glenn be making in order for his equation to give the correct area of the shaded region? Select **all** that apply.

A. The quadrilateral is a rhombus.
B. The quadrilateral is a rectangle.
C. The curved figure in the center is a circle.
D. The curved figure in the center is a sphere.