NAME _____ DATE _____ PERIOD _____

Geometry - Lesson 2

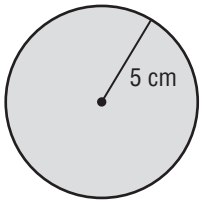
Area of Circles

The area A of a circle equals the product of pi (π) and the square of its radius r.

$$A = \pi r^2$$

Example 1

Find the area of the circle. Use 3.14 for π.



$A = \pi r^2$	Area of circle
$A \approx 3.14 \cdot 5^2$	Replace π with 3.14 and r with 5.
$A \approx 3.14 \cdot 25$	$5^2 = 5 \cdot 5 = 25$
$A \approx 78.5$	

The area of the circle is approximately 78.5 square centimeters.

The formula for the area of a semicircle, or half a circle, is $A = \frac{1}{2}\pi r^2$.

Example 2

Find the area of a semicircle that has a diameter of 9.4 millimeters. Use 3.14 for π. Round to the nearest tenth.

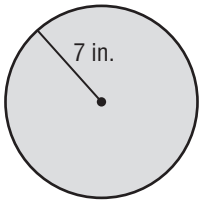
$A = \frac{1}{2}\pi r^2$	Area of semicircle
$A \approx \frac{1}{2} \cdot 3.14 \cdot 4.7^2$	Replace π with 3.14 and r with 9.4 ÷ 2 or 4.7.
$A \approx 34.7$	Multiply.

The area of the semicircle is approximately 34.7 square millimeters.

Exercises

Find the area of each circle. Round to the nearest tenth. Use 3.14 or $\frac{22}{7}$ for π.

1.



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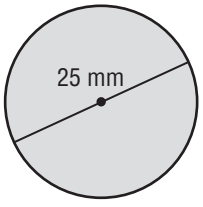

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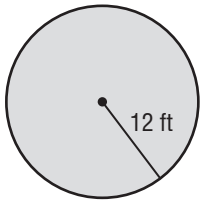
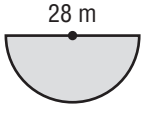


Find the area of each semicircle. Round to the nearest tenth. Use 3.14 or $\frac{22}{7}$ for π.

4.



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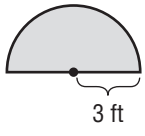
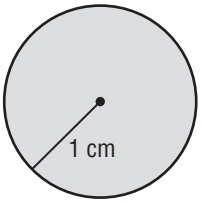


Geometry - Lesson 2 **Skills Practice**

Area of Circles

Find the area of each circle. Round to the nearest tenth.
Use 3.14 or $\frac{22}{7}$ for π.

1.



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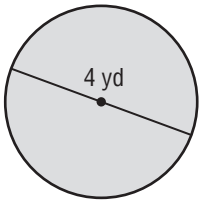

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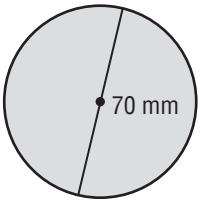

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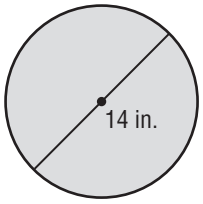

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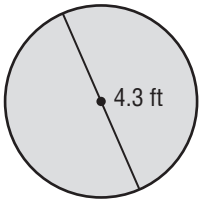

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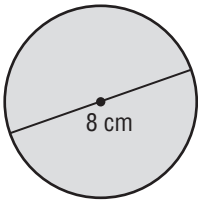


7. radius = 5.7 mm

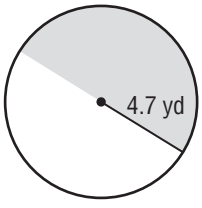
8. radius = 8.2 ft

9. diameter = 3 in.

10. diameter = 15.6 cm

Find the area of each semicircle. Round to the nearest tenth.
Use 3.14 for π.

11.



12.