

11-3

Skills Practice

Areas of Regular Polygons and Circles

Find the area of each regular polygon. Round to the nearest tenth.

1. a pentagon with a perimeter of 45 feet
 139.4 ft^2
2. a hexagon with a side length of 4 inches
 41.6 in^2

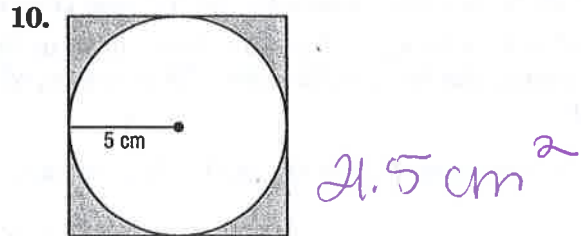
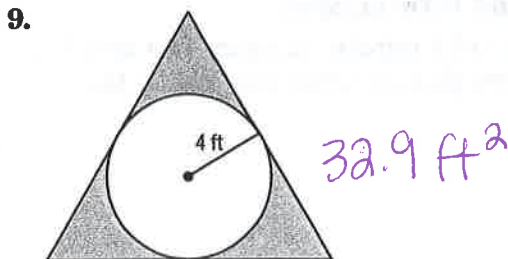
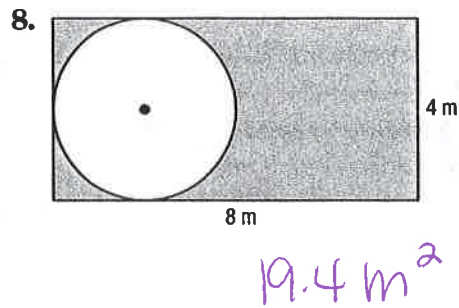
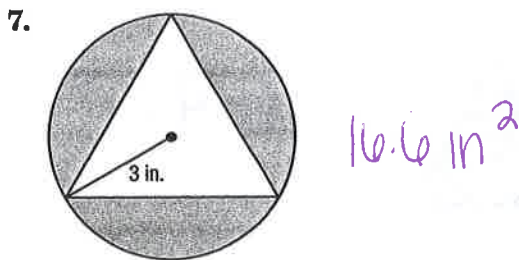
3. a nonagon with a side length of 8 meters
 395.6 m^2

4. a triangle with a perimeter of 54 centimeters
 140.3 cm^2

Find the area of each circle. Round to the nearest tenth.

5. a circle with a radius of 6 yards
 113.1 yd^2
6. a circle with a diameter of 18 millimeters
 254.5 mm^2

Find the area of each shaded region. Assume that all polygons are regular. Round to the nearest tenth.



11-3

Practice

Areas of Regular Polygons and Circles

Find the area of each regular polygon. Round to the nearest tenth.

1. a nonagon with a perimeter of 117 millimeters

1044.7 mm^2

2. an octagon with a perimeter of 96 yards

695.3 yd^2

Find the area of each circle. Round to the nearest tenth.

3. a circle with a diameter of 26 feet

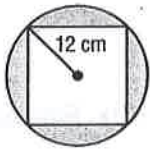
530.9 ft^2

4. a circle with a circumference of 88 kilometers

616.2 km^2

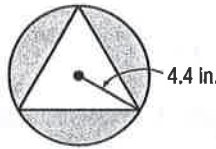
Find the area of each shaded region. Assume that all polygons are regular. Round to the nearest tenth.

5.



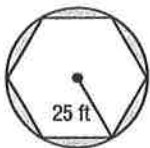
164.4 cm^2

6.



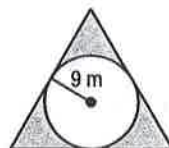
35.7 in^2

7.



339.7 ft^2

8.



166.4 m^2

DISPLAYS For Exercises 9 and 10, use the following information.

A display case in a jewelry store has a base in the shape of a regular octagon. The length of each side of the base is 10 inches. The owners of the store plan to cover the base in black velvet.

9. Find the area of the base of the display case.

about 482.8 in^2

10. Find the number of square yards of fabric needed to cover the base.

about 0.37 yd^2