

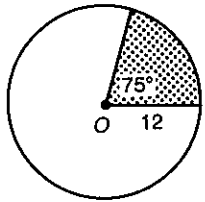
# Practice 45

## Circles, Similar Figures, and Geometric Probability

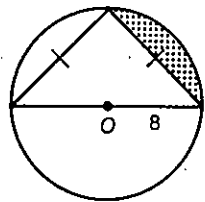
Lessons 11-5 through 11-8

Complete.

- The areas of two circles are in the ratio 16:49. The ratio of the diameters is 4:7.
- The perimeters of two similar triangles are in the ratio 2:5. The ratio of their areas is 4:25.
- A circle has radius 5 cm. Use  $\pi \approx 3.14$  to find the circumference and area of the circle. circumference = 31.4 area = 78.5
- A circle has circumference  $12\pi$  m. The area of the circle is  $36\pi$ .
- Find the arc length and area of the shaded sector.
- Find the area of the shaded region.



arc length =  $5\pi$   
 area =  $30\pi$

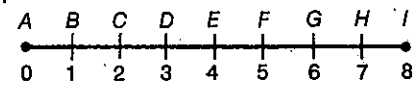


area =  $16\pi - 32$

- A trapezoid with sides of lengths 5 m, 4 m, 5 m, and 12 m has area  $24 \text{ m}^2$ . Find the area of a similar trapezoid with longest side 18 m. 54

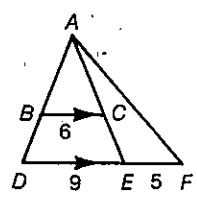
A point  $P$  is picked at random on  $\overline{AI}$ . What is the probability that  $P$  is on the given segment?

- $\overline{CD}$   $1/8$
- $\overline{AD}$   $3/8$
- $\overline{AI}$  1
- $\overline{HI}$   $1/8$



Find the ratio of the areas for each pair of triangles.

- $\triangle ABC$  to  $\triangle ADE$  4:9
- $\triangle ADE$  to  $\triangle ADF$  9:14



- A point is chosen at random inside  $\triangle VXY$ . What is the probability that the point is inside quad.  $WXYZ$ ?  $16/25$

