Name: _____ Period: _____

Date: _____ Row: _____

Assignment #: _____

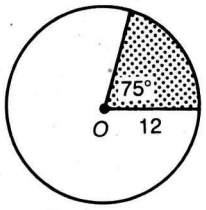
Practice 45

Circles, Similar Figures, and Geometric Probability

Lessons 11-5 through 11-8

Complete.

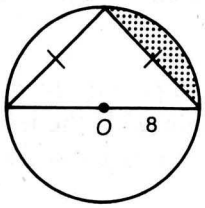
1. The areas of two circles are in the ratio 16:49. The ratio of the diameters is _____.
2. The perimeters of two similar triangles are in the ratio 2:5. The ratio of their areas is _____.
3. A circle has radius 5 cm. Use $\pi \approx 3.14$ to find the circumference and area of the circle. circumference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



arc length = _____

area = _____

6. Find the area of the shaded region.

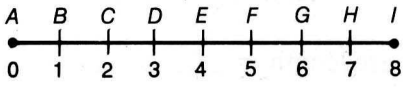


area = _____

7. A trapezoid with sides of lengths 5 m, 4 m, 5 m, and 12 m has area 24 m^2. Find the area of a similar trapezoid with longest side 18 m. _____

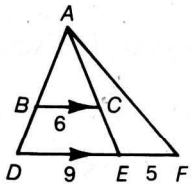
A point P is picked at random on $\overline{AI}$. What is the probability that P is on the given segment?

8. $\overline{CD}$ _____
9. $\overline{AD}$ _____
10. $\overline{AI}$ _____
11. $\overline{HI}$ _____

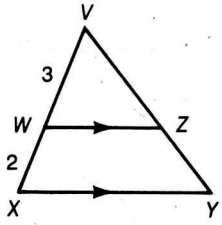


Find the ratio of the areas for each pair of triangles.

12. $\triangle ABC$ to $\triangle ADE$ _____
13. $\triangle ADE$ to $\triangle ADF$ _____



14. A point is chosen at random inside $\triangle VXY$. What is the probability that the point is inside quad. $WXYZ$? _____



Geometric Probability

For use after Section 11–8

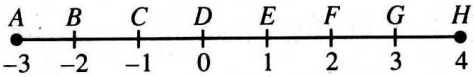
In Exercises 1–4 a point P is selected at random from $\overline{AG}$. Find the probability that P is on the given segment.

1. $\overline{DE}$ _____

2. $\overline{BF}$ _____

3. $\overline{FH}$ _____

4. $\overline{AH}$ _____

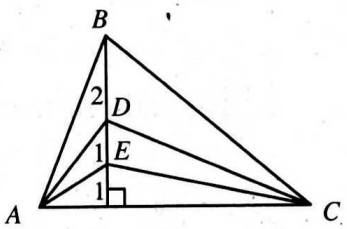


Exs. 1–6

5. A point P is selected at random from inside $\triangle ABC$.

   a. What is the probability that P lies inside $\triangle AEC$? _____

   b. What is the probability that P lies outside $\triangle ADC$? _____

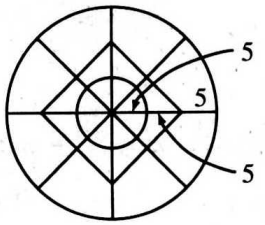


6. A dart lands at a random point on the dartboard shown.

   a. Find, to the nearest tenth, the probability that the dart lands inside the square. (Use $\pi \approx 3.14$.) _____

   b. Find, to the nearest tenth, the probability that the dart lands inside the square but outside the inner circle. (Use $\pi \approx 3.14$.)

   _____



7. A parachutist jumps from an airplane and lands on the square field shown. Find the probability that the parachutist lands outside the shaded region. _____