

Name: _____
 Geometry

Date: _____
 Band: _____

Trigonometry and Area HW 2

LT#2: Find areas of regular polygons and triangles using trigonometry.

1. $ABCDEFGH$ is a regular octagon with center X and radius 5 cm. Find each measure to the nearest tenth.

A. $m\angle FXE$

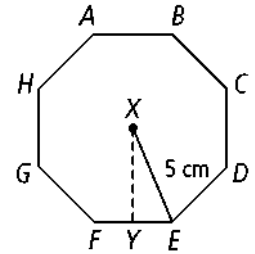
B. $m\angle YXE$

C. XY

D. FE

E. perimeter of $ABCDEFGH$

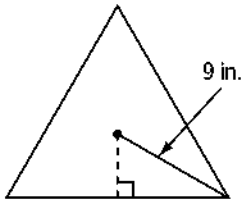
F. area of $ABCDEFGH$



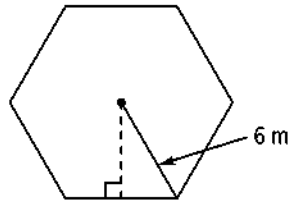
2. Several streets intersect to form triangles near Dupont Circle in Washington, D.C. One such triangle is formed by New Hampshire Avenue, Massachusetts Avenue, and 16th Street. The section of New Hampshire Avenue is about 3100 ft long. The section of 16th Street is about 3500 ft long. The angle enclosed by the two streets has a measure of about 35. What is the area of this triangle, to the nearest 100 ft²?

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

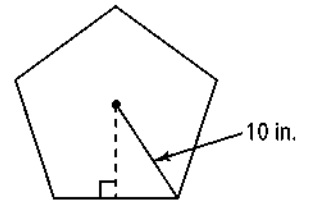
3.



4.



5.



6. octagon with radius 10 cm

7. Decagon with radius 4mm