1) Six of the Seven **interior** angles in a heptagon have measures 100°, 67°, 145°, 120°, 162° and 167°. Find the measure of the seventh interior angle.

2) Five of the six **interior** angles in a hexagon have measures 120°, 96°, 154°, 137° and 99°. Find the measure of the sixth interior angle.

3) Four of the five interior angles in a pentagon have measures 117°, 131°, 164°, and 75°. Find the measure of the fifth interior angle.

4) Eight of the nine interior angles in an nonagon have measures 145°, 162°, 170°, 126°, 133°, 149°, 155° and 101°. Find the measure of the ninth interior angle.

5) Three of the four **exterior** angles in a quadrilateral have measures 36°, 169°, and 122°. Find the measure of the fourth exterior angle.

6) Four of the five **exterior** angles in a pentagon have measures 49°, 77°, 135°, and 47°. Find the measure of the fifth exterior angle.

7) The measures of the exterior angles of a heptagon are 10x, 13x, 6x, 14x, 8x, 16x, and 23x. Find the measure of each angle.

8) The measures of the exterior angles of a octagon are 3x, 11x, 5x, 7x , 2x, 3x, 6x and 8x. Find the measure of each angle.

9) The measures of the exterior angles of a hexagon are 12x + 3, 8x - 1, 6x - 2, 15x + 5, 5x - 2, and 4x + 7. Find the measure of each angle.

10) The measures of the exterior angles of a quadrilateral are 8x - 1, 18x + 1, 6x + 4, and 7x + 5. Find the measures of each angle.

11) The sum of the interior angles of a polygon is 2160°. How many sides does the polygon have?

12) The sum of the interior angles of a polygon is 1260°. How many sides does the polygon have?

Find the measure of each interior and each exterior angle in each of the following regular polygons.
13) Hexagon   14) Nonagon   15) Octagon   16) Undecagon

17) The sum of the angle measures in a regular polygon is 720°. Find the measure of each angle.

18) The sum of the angle measures in a regular polygon is 900°. Find the measure of each angle

The horizontal segments below are evenly spaced. Find the lengths of the missing horizontal segments.

19)

16yds

34yds

20)

20 ft

46 ft