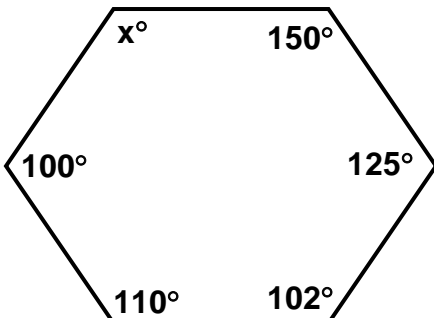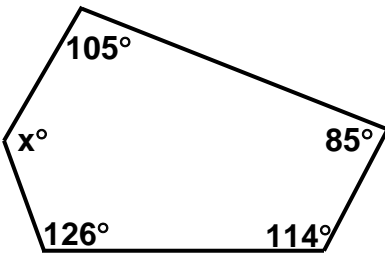NAME_____DATE_____PER._____

A# 10-6: INTERIOR AND EXTERIOR ANGLES OF POLYGONS

For each of the regular polygons, find a)the sum of the measures of the interior angles, b) the measure of each interior angle, c)the sum of the measures of the exterior angles, and d) the measure of each exterior angle.

1.   a) _____
 	
      b) _____
 	
      c) _____
 	
      d) _____
	Heptagon

2.   a) _____
 	
      b) _____
 	
      c) _____
 	
      d) _____
	18-gon

3.   a) _____
 	
      b) _____
 	
      c) _____
 	
      d) _____
	32-gon

Find the missing angle in each of the following.

4. x = _____	$x°$ 150° 100° 125° 110° 102°
5. x = _____	105° $x°$ 85° 126° 114°

Find the number of sides for each of the following.

6. n = _____	The measure of one interior angle of a regular polygon is 108°.
7. n = _____	The measure of one interior angle of a regular polygon is 157.5°.
8. n = _____	The measure of one exterior angle of a regular polygon is 24°.
9. n = _____	The measure of one exterior angle of a regular polygon is 18°.
10. n = _____	The sum of the interior angles of a polygon is 2700°.
11. n = _____	The measure of one interior angle of a regular polygon is 135°.

12. n = _____	The measure of one exterior angle of a regular polygon is 10°.

REVIEW

13. CD = _____	Find CD if C(0, 3) and D(4, 7).
14. (_____, _____)	Find the midpoint of $\overline{CD}$ if C(0, 3) and D(4, 7).
15. BC = _____	B lies between A and C. AB = 2x – 7, BC = 4x + 2, and AC = 37. Find BC.