Name _____   Date _____

Polygons

Types of Polygons		
Number of Sides	*Name*	• A regular polygon has equal angles and equal sides.
3	triangle	• The sum of the measures of the angles of a convex polygon with n sides is (n − 2) 180°.
4	quadrilateral	
5	pentagon	
6	hexagon	
8	octagon	• The sum of the measures of the exterior angles of any convex polygon is 360°.
10	decagon	
n	n-gon	

Find the following for each polygon: a) The sum of the measures of the interior angles, b) The sum of the measures of the exterior angles.

1. A 32-sided polygon 5400, 360   2. A 12-sided polygon 1800, 360

3. A 6-sided polygon 720, 360   4. An 8-sided polygon 1080, 360

5. A 3-sided polygon 180, 360   6. A 5-sided polygon 540, 360

Find the following for each regular polygon: a) The measure of each exterior angle, b) the measure of each interior angle.

7. A 6-sided polygon 120, 60   8. A 5-sided polygon 108, 72

9. A 3-sided polygon 60, 120   10. An 8-sided polygon 135, 45

11. A 4-sided polygon 90, 90   12. A 10-sided polygon 144, 36

13. A regular polygon has an exterior angle with a measure of 20°. Find the number of sides.   18

14. A regular polygon has an interior angle with a measure of 120°. Find the number of sides. 6

15. A regular polygon has 20 sides. Find the measure of each exterior angle.   18°

16. A regular polygon has 10 sides. Find the measure of each interior angle.   144°