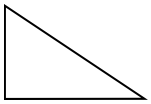
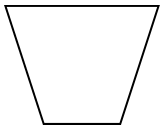
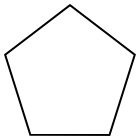
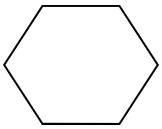
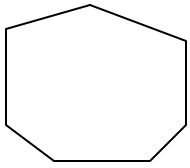
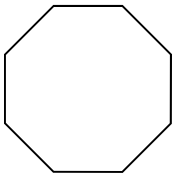
Geometry

Unit 2 Lesson 2: Properties of Polygons

Name:
Date: Period: 1 2 3 4 5 6

Interior angles:

Polygon	Name of polygon	# of sides	Number of triangles	Sum of measures of interior angles	Measure of Interior angle if regular
A picture of a polygon, not necessarily regular			After drawing diagonals from one vertex, how many triangles?	# of triangles times 180^o	
					
					
					
					
					
					
	n-sided polygon				

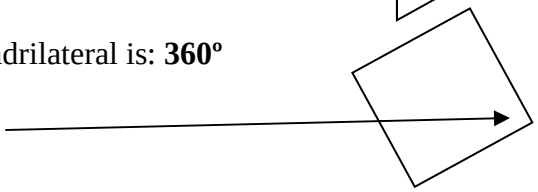
Theorem 6.1: The sum of the measures of the interior angles of a convex n-gon is:

In the previous theorem, we found the sum of all the interior angles inside any convex polygon.
If a convex polygon was *regular* (all the angles and sides are the same), then what would each angle be?
For example, the sum of the measures of the interior angles of a triangle is: **180º**

If the triangle is regular, then each angle would be:_____

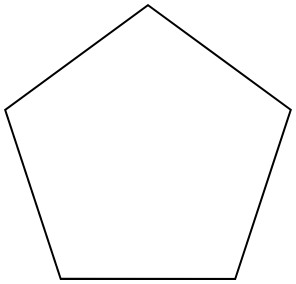
Next example, the sum of the measures of the interior angles of a quadrilateral is: **360º**

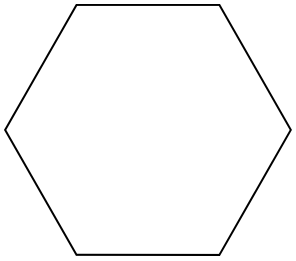
If the triangle is regular, then each angle would be:_____



Corollary to Theorem 6.1: The measure of an interior angle of a *regular* convex n-gon is:

Exterior angles:





Polygon	# of sides	Sum of exterior angles	Exterior angle measures of regular polygon
	3		
	4		
	5		
	6		
	7		
	8		
	9		
	10		
	n-gon		

Theorem 6.2: The sum of the measures of a *regular* convex n-gon is:

Corollary to Theorem 6.2: The measure of an exterior angle of a *regular* convex n-gon is: