

Math 2 Unit 5
Investigation

Name: _____
Date: _____ Per: _____

Polygon: A closed figure formed by 3 or more line segments (sides).

CONVEX: This polygon is a convex polygon.

CONCAVE: This polygon is a concave polygon (not convex).



Use a straight edge to draw convex polygons in the following chart. Within each polygon, draw all the diagonals from **ONE** vertex only.

3-sided Polygon	4-sided Polygon	5-sided Polygon
6-sided Polygon	8-sided Polygon	<i>n</i> -sided Polygon

Complete the table based on the above chart. Write a formula to find the sum of the interior angles of ANY polygon.

Polygon (name)	Number of Sides	Number of Triangles	Sum of the measures of interior angles
Triangle	3	1	180°
	4		
	5		
	6		
	8		
	<i>n</i>		

What is the relationship with the number of sides and triangles? _____

Write a formula that would work for any *n*-gon? _____