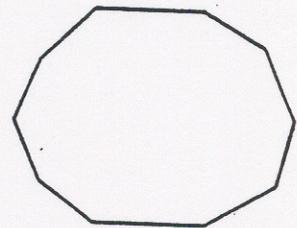
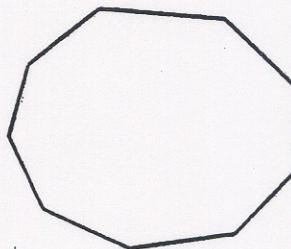
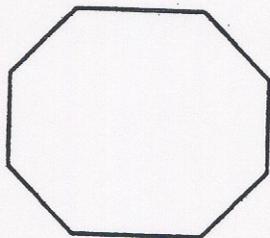
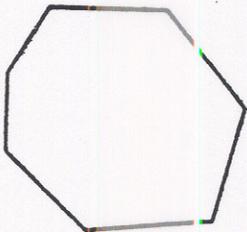
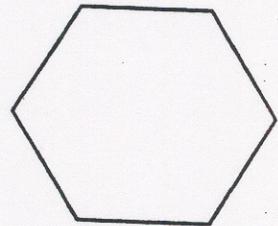
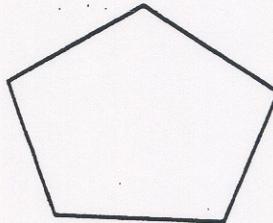
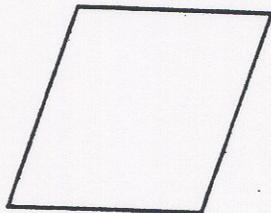
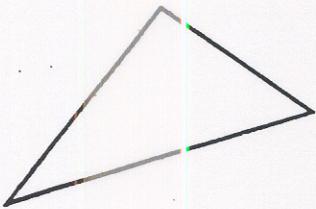


Polygons: What's the Inside Angle?

- Problem:** What is the relationship, if any, between the number of sides of a polygon and
- the number of triangles formed from the diagonals from one vertex
 - the sum of the interior angles.

Procedure: Use the polygons below.

- Draw all the diagonals possible from one vertex.
- Record the numbers of triangles formed.
- Note that all the triangle vertices are at vertices of the polygon. So we can calculate the sum of the interior angles of the polygon by multiplying the number of triangles by 180.
- Look for a pattern, then derive a formula for n-gons.



Polygon	Number of Sides	Number of Triangles	Sum of the Interior Angles
Triangle	3		
Quadrilateral	4		
Pentagon	5		
Hexagon	6		
Heptagon	7		
Octagon	8		
Nonagon	9		
Decagon	10		
n-gon	n		