

Polygons: What's the Exterior Angle?

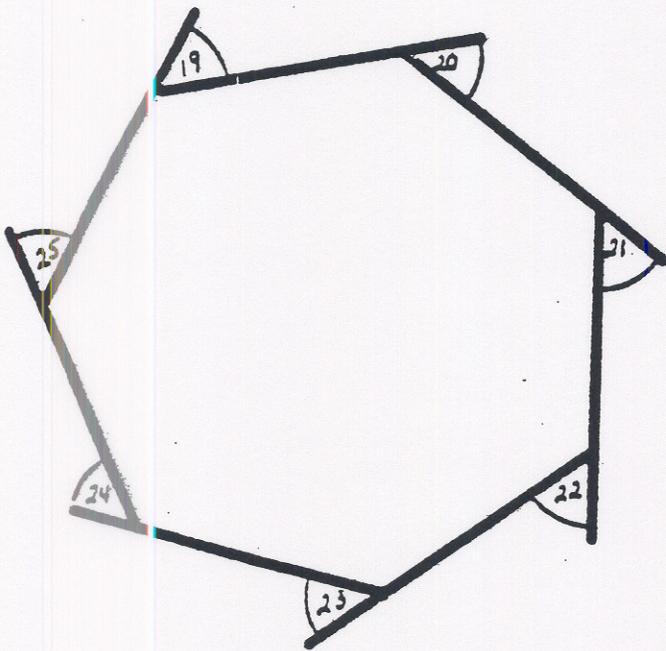
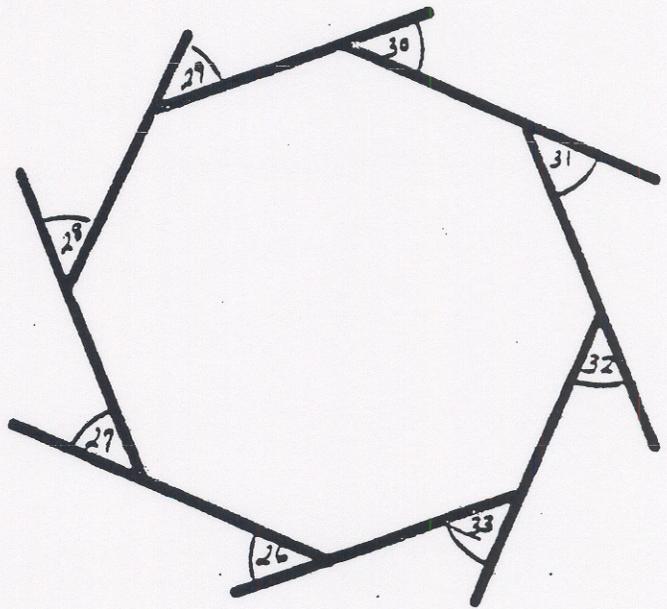
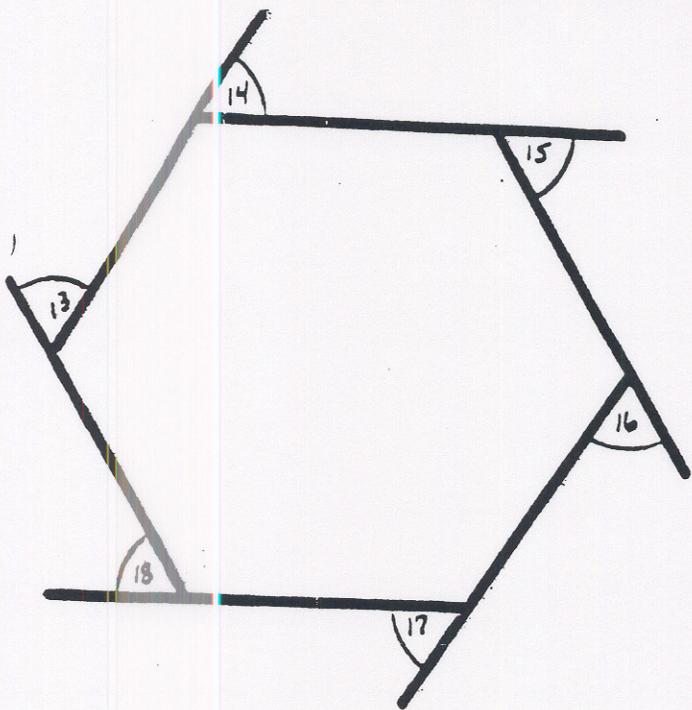
Problem: What is the relationship, if any, between the number of sides of a polygon and the sum of the exterior angles.

Procedure: Use the polygons found on the attached two pages. Note that exterior angles are drawn at each vertex.

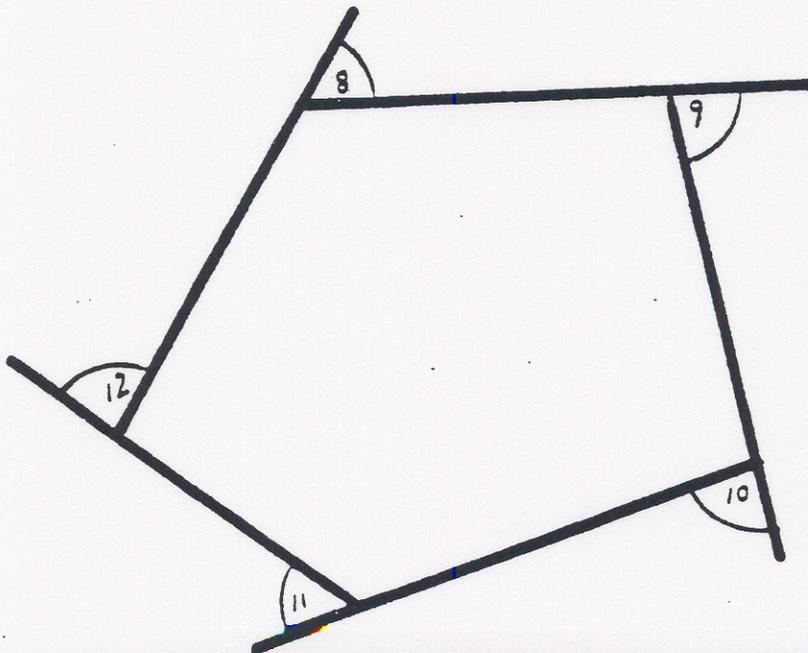
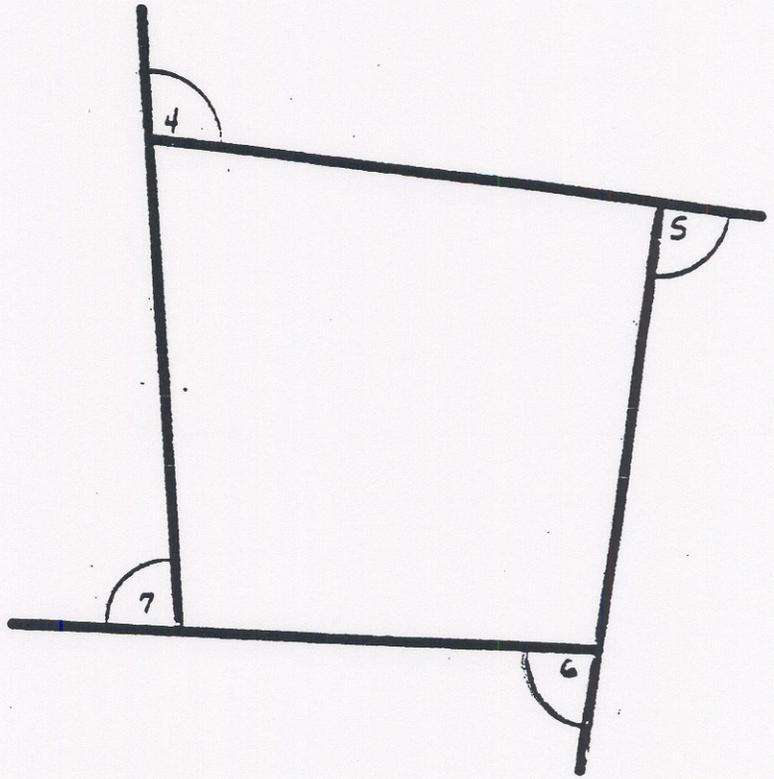
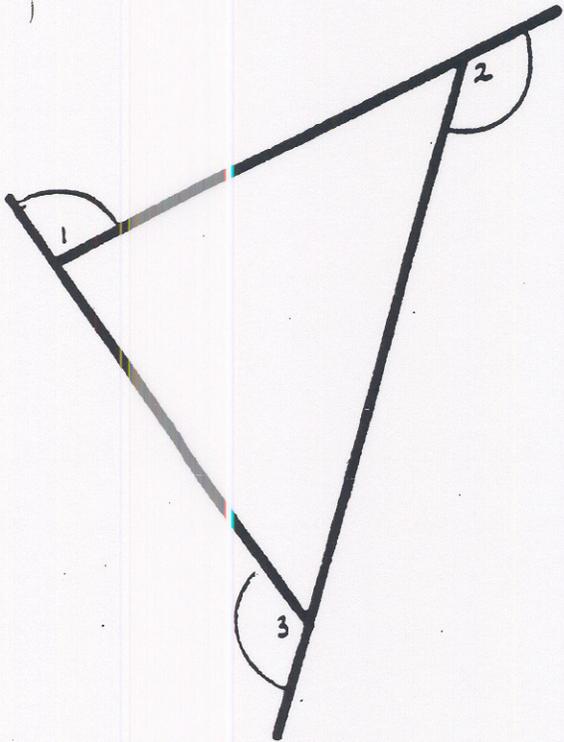
- Use scissors to cut out the exterior angles. You should now have a polygon and numbered angles (in an amount equal to the number of sides of that polygon).
- Place the numbered angles together in such a way that all the numbers converge at the center and each angle is adjacent to two others.
- What do you observe about this figure? Record the total of the measures for these exterior angles in the proper space on the chart that follows.

Number of Sides of the Polygon	Exterior Angle Sum
3	
4	
5	
6	
7	
8	

Write a conclusion concerning the sum of the exterior angle measures for any polygon.



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