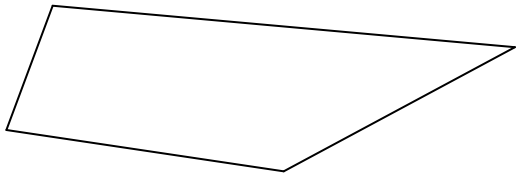
ANGLES IN A POLYGON

The sum of the interior angles in ***any*** triangle is _____° . (No matter what its size or shape!)

A quadrilateral can be divided into two triangles. Draw a diagonal in each quadrilateral below to accomplish this.

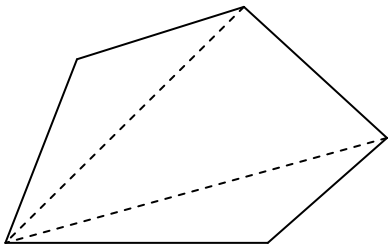


The sum of the interior angles in a quadrilateral is _____° because each of the 2 triangles contributes _____° to the angle sum.

Any polygon can be divided into triangles to determine the sum of the angles.

For example, a ***pentagon*** can be divided up as follows:

Important!
All diagonals must be drawn starting at the *same* vertex.



Number of triangles = _____

Sum of angles = ___ × 180° = _____°

Complete the following chart:

POLYGON	NUMBER OF SIDES	TRIANGLES FORMED	SUM OF THE INTERIOR ANGLES
Triangle	3	1	180°
Quadrilateral	4		
Pentagon			
	6		
	7		
Octagon			
Nonagon			
	10		
100-gon	100		
		20	
			2700°
n-gon	*n*		