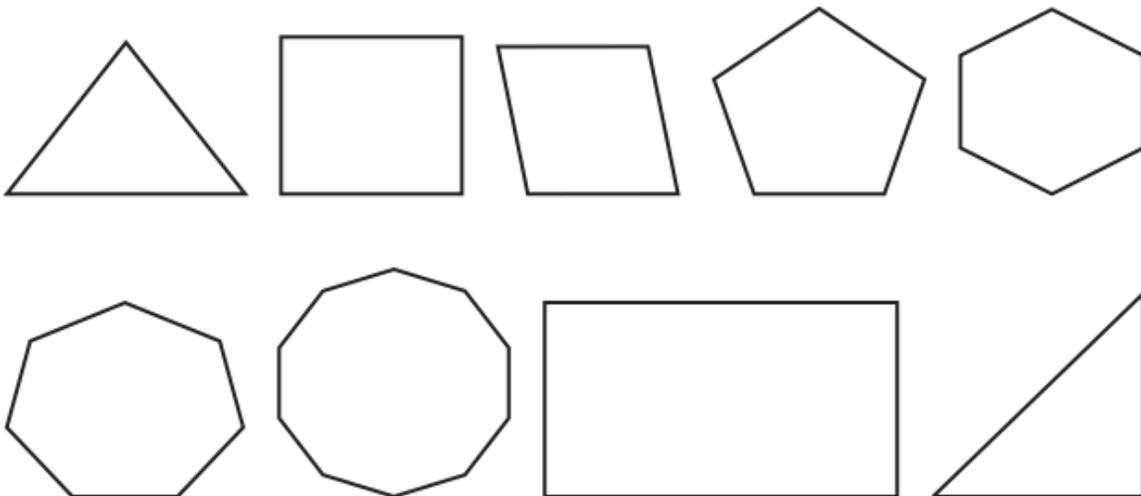


Polygons:



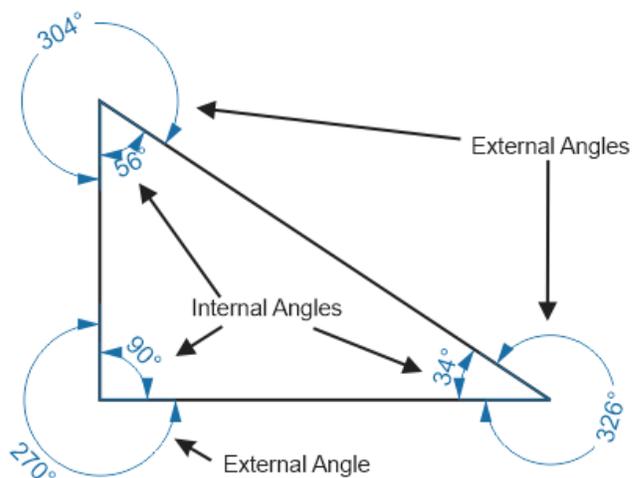
Closed 2D shapes that are made up of straight lines are called Polygons. The word polygon is a combination of two Greek words: 'poly' means many and 'gon' means angle. An angle is the amount of turn, measured in degrees between two intersecting lines. Along with its angles, a polygon also has sides and vertices. Simplest polygon is called the triangle, because it has three angles.

Polygons may have three, four, five, six, or more sides. Many of the simple polygons have been given names. For example, a polygon with three sides is called a triangle. A polygon with four sides is called a quadrilateral. A polygon with five sides is called a pentagon, penta means five. Hexa means six, so a hexagon has six sides. Hepta means seven, so a heptagon means a polygon that has seven sides. Here are some examples of polygons.



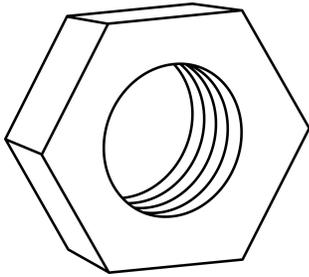
Polygon	No of sides	Number of angles	No. of vertices	No. of Diagonal	Sum of interior angles in degrees
Triangle	3	3	3	0	180
Quadrilateral	4	4	4	2	360
Pentagon	5	5	5	5	540
Hexagon	6	6	6	9	720
Heptagon	7	7	7	14	900
Octagon	8	8	8	20	1080
Nonagon	9	9	9	27	1260
Decagon	10	10	10	35	
Any Polygon	n			$n(n - 3) / 2$	$(n-2) \times 180$

An interior angle is an angle inside the shape.

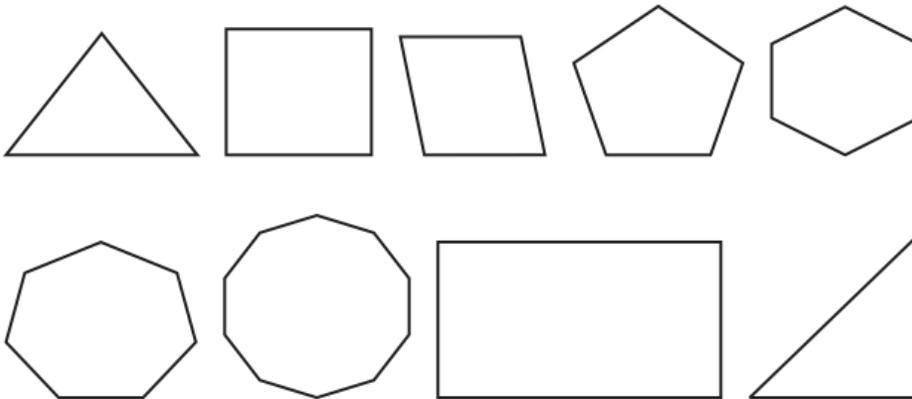


A quadrilateral is also a polygon. A quadrilateral is formed by four line segments that intersect at their endpoints. Squares and rectangles are quadrilaterals that have four right angles. The sum of the angles of a quadrilateral is always 360° . Quadrilaterals can look very different:

What polygon do you see on the outer side of the picture ?



What polygons do you see below?



What polygon do you see below?



What is the definition of a polygon?

What is the definition of a quadrilateral ?

Why a circle is not a polygon?

What is meant by an octagon?

Can an octagon be classified as a polygon ?

Draw as many other polygonal shapes as you can: