Polygons

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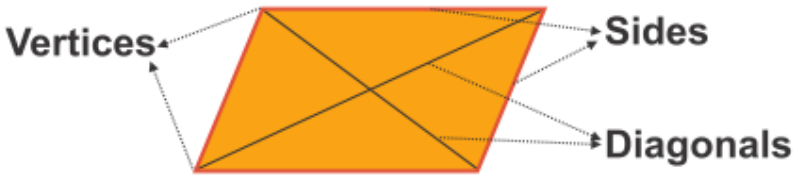
A **polygon** is a closed figure formed by line segments, such that:

- Two line segments intersect only at their end-points



Polygon	# of sides	# of triangles	Sum of interior angles
Triangle	3	1	$180°$
Quadrilateral	4	2	$2 \cdot 180 = 360°$
Pentagon	5	3	$3 \cdot 180 = 540°$
Hexagon	6	4	$4 \cdot 180 = 720°$
Heptagon	7	5	$5 \cdot 180 = 900°$
Octagon	8	6	$6 \cdot 180 = 1080°$
n-gon	n	n - 2	$(n - 2) \cdot 180°$

Type	Properties
Parallelogram 	• Opposite sides are equal and parallel • Opposite angles are equal
Rectangle 	• Opposite sides are equal and parallel • All angles are right angles (90°)
Square 	• Opposite sides are parallel • All sides are equal • All angles are right angles (90°)
Rhombus 	• Opposite sides are parallel • All sides are equal • Opposite angles are equal • Diagonals bisect each other at right angles (90°)
Trapezoid 	• One pair of opposite sides is parallel
Kite 	• Two pairs of adjacent sides are equal • One pair of opposite sides are equal • One diagonal bisects the other • Diagonals intersect at right angle (90°)