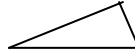


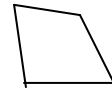
Polygons

A polygon is a simple closed plane figure with segments as sides. In other words, take segments, connect them at the ends, and end back where you started. The smallest polygon is a triangle, having three sides. There is no largest polygon, but after a while we quit giving them special names.

Triangle: Three sides, three angles, 180° inside.



Quadrilateral: Four sides and angles, 360° inside. There are several types, including trapeziums (kites and deltoids), parallelograms (rhombi, rectangles and squares), and trapezoids. See our study guide on quadrilateral classification.



Pentagon: Five sides and angles, 540° inside.



Hexagon: Six sides and angles, 720° inside.



Heptagon: Seven sides and angles, 900° inside.

Octagon: Eight sides and angles, 1080° inside. (Think stop sign!)



Nonagon: Nine sides and angles, 1260° inside.

Decagon: Ten sides and angles, 1440° inside.

Undecagon: Eleven sides and angles, 1620° inside.

Dodecagon: Twelve sides and angles, 1800° inside.

Triskadecagon: Thirteen sides and angles, 1980° inside.



The other teen-sided polygons have the same name pattern, but usually we start calling them by their number, such as a 14-gon. There are a few special polygons, such as:

Icosagon: 20 sides and angles, 3240° inside.

Centagon: 100 sides and angles, $17,640^\circ$ inside.

Millagon: 1000 sides and angles, $179,640^\circ$ inside.

As the number of sides increases, the polygon gets closer to a circular shape. Any polygon after octagon would probably roll as a wheel, but they would not roll smoothly. A millagon would look almost totally circular. If the polygon is equiangular, each angle gets closer to being a straight line (180°). Each angle of an equilateral triangle is 60° , but each angle of a millagon is 179.64° .

The sum of the “**Exterior Angles**” of any polygon is 360° .