



## Polygon Properties

### About These Problems

Polygon properties are basic properties of any n-sided shape. These include sides, vertices, interior angles, exterior angles, and diagonals.

#### Definitions.

Side: One of the line segments that makes up the polygon.

Vertex: Point where two sides meet.

Diagonal: A line connecting two vertices that isn't a side.

Interior Angles: Angle inside the polygon that is formed by two adjacent sides.

Exterior Angles: Angle outside the polygon formed by two adjacent sides.

**Question.** The sum of the interior angles in an equilateral pentagon is 540 degrees. What is the measurement of one of the exterior angles?

1. 252 degrees
2. 151 degrees
3. 300 degrees
4. 175 degrees
5. 108 degrees

**Answer. 1:** If a pentagon is equilateral, it means that all its sides and interior angles must be congruent.  $540 / 5 = 108$ . The sum of the interior angle and exterior angle is 360.  $360 - 108 = 252$ .