

# ANGLES IN POLYGONS

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**POLYGON** is a two-dimensional shape with straight sides.

A regular **polygon** has all its sides equal and all its angles equal.

angles in a pentagon add up to  $540^\circ$

In a hexagon angles add up to  $720^\circ$

$$\text{total angles} = (n - 2) \times 180$$

↑  
sides

IMPORTANT

12 sides

~~individual angles =~~

total angles:

$$12 - 2 = 10$$

$$10 \times 180 = 1800$$

$$\text{exterior angle} = 180^\circ - \text{interior angle}$$

IMPORTANT

$$\text{Number of sides} = \frac{360^\circ}{\text{exterior angle}}$$

**Exterior angle** is  $= \frac{360^\circ}{\text{number of sides}}$ .

$$\begin{aligned} \text{Interior angles} &= 180^\circ - \text{exterior angle} \\ &= \frac{(n - 2) \times 180}{\text{number of sides}} \end{aligned}$$