

Angle Measurements of Polygons

Triangles always have an internal angle sum of 180°



Each time a polygon gets another side, another 180° is added (adds a triangle)

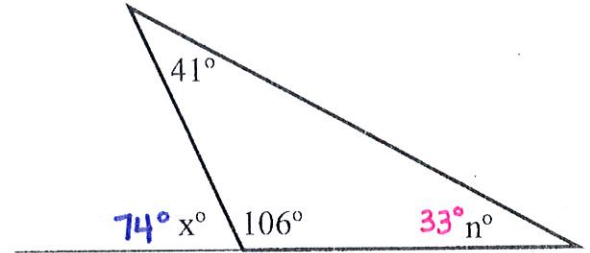
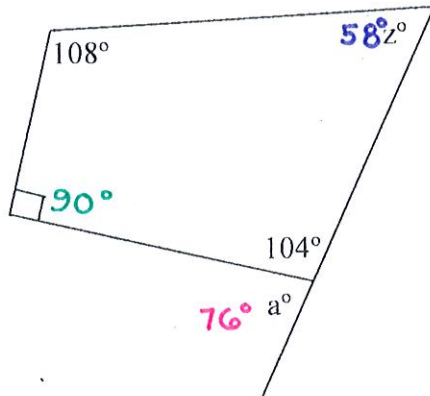
So, the internal angle sum of a quadrilateral is 360° , pentagon 540° , hexagon 720° and so on...

This knowledge can help find unknown angles.

Examples:

$$\begin{array}{r} 108 \\ 104 \\ + 90 \\ \hline 302 \end{array} \quad \begin{array}{r} 360 \\ - 302 \\ \hline 58 \end{array}$$

$$\begin{array}{r} 180 \\ - 104 \\ \hline 76 \end{array} \quad \begin{array}{l} z = 58^\circ \\ a = 76^\circ \end{array}$$



$$\begin{array}{r} 106 \\ + 41 \\ \hline 147 \end{array} \quad \begin{array}{r} 180 \\ - 147 \\ \hline 33 \end{array} \quad \begin{array}{l} n = 33^\circ \end{array}$$

$$\begin{array}{r} 180 \\ - 106 \\ \hline 74 \end{array} \quad \begin{array}{l} x = 74^\circ \end{array}$$