

5-9-18

Aim: SWBAT find the missing measure of quadrilaterals algebraically.

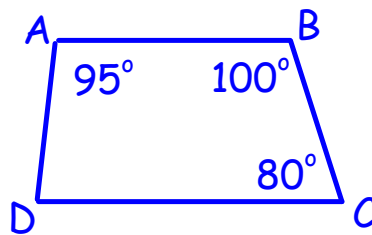
HW: Pg. 418 # 9 - 13, 17 - 18

Quiz Friday (Triangles and Quadrilaterals)

Do Now: Check hw

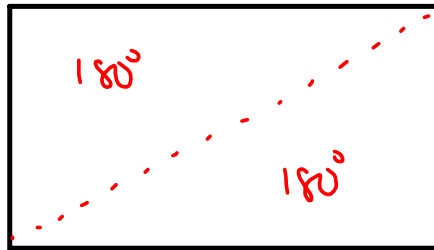
To find the missing angle measure of any quadrilateral (4-sided shape), add up all the angles and set it equal to 360° .

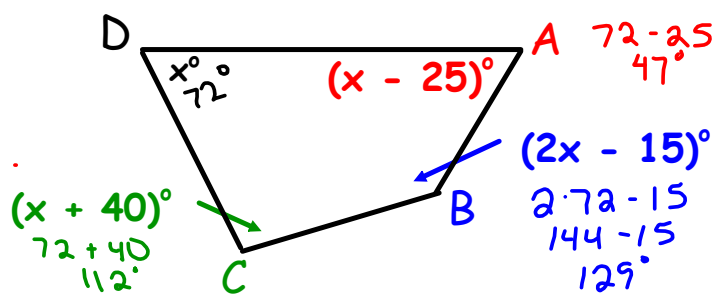
In Quadrilateral ABCD, the measure of $\angle A$ is 95° , the measure of $\angle B$ is 100° , and the measure of $\angle C$ is 80° . Find the measure of $\angle D$.



$$x + 95 + 100 + 80 = 360$$

$$\begin{array}{r} x + 275 = 360 \\ - 275 \quad - 275 \\ \hline x = 85 \end{array}$$





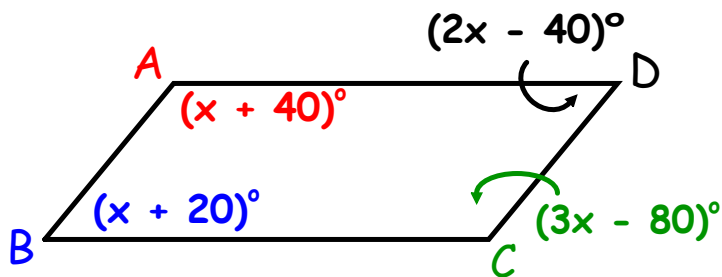
$$x + (x - 25) + (x + 40) + (2x - 15) = 360$$

$$x + x \boxed{-25} + x \boxed{+40} + 2x \boxed{-15} = 360$$

$$\frac{\cancel{5}x}{\cancel{5}} = \frac{360}{5}$$

$$x = 72$$

Solve for x . Then find the measure of each angle.



$$(x+40) + (x+20) + (3x-80) + (2x-40) = 360$$

$$\begin{array}{r} 7x - 60 = 360 \\ + 60 \quad + 60 \\ \hline \cancel{7x} = \cancel{420} \\ \phantom{\cancel{7x}} = 60 \\ x = 60 \end{array}$$

$$\begin{array}{l} m\angle A \\ x+40 \\ 60+40 \\ \boxed{100^\circ} \end{array}$$

$$\begin{array}{l} m\angle B \\ 2x-40 \\ 2 \cdot 60 - 40 \\ 120 - 40 \\ \boxed{80^\circ} \end{array}$$

$$\begin{array}{l} m\angle C \\ 3x-80 \\ 3 \cdot 60 - 80 \\ 180 - 80 \\ \boxed{100^\circ} \end{array}$$

$$\begin{array}{l} m\angle D \\ 2x-40 \\ 2 \cdot 60 - 40 \\ 120 - 40 \\ \boxed{80^\circ} \end{array}$$