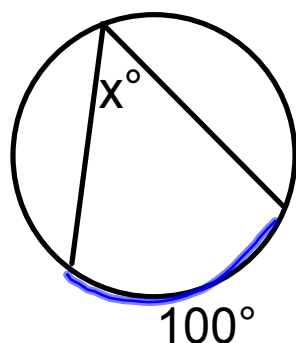
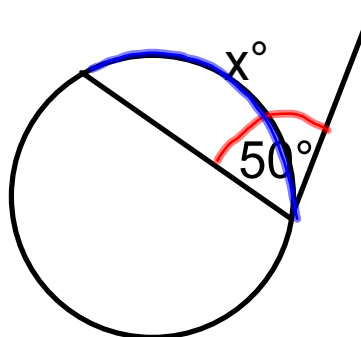


Do-now: Determine the value of x in each of the diagrams below.



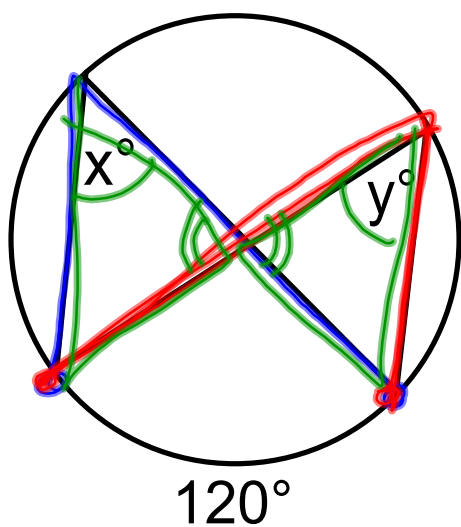
$$x = 50$$

Inscribed \angle s =
 $\frac{1}{2}$ intercepted arc



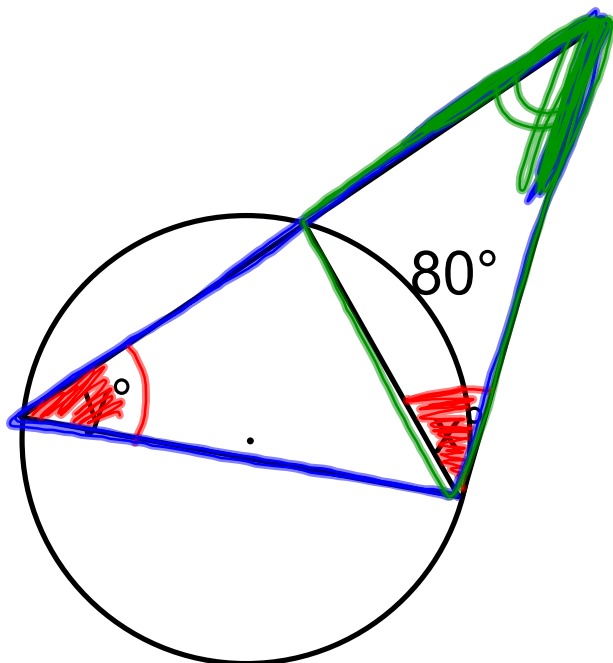
$$x = 100$$

\angle formed by
 Chord & tangent =
 $\frac{1}{2}$ intercepted arc



$$\begin{array}{l} x = 60 \\ y = 60 \end{array} \left. \begin{array}{l} \text{Inscribed} \\ \text{Angles} = \\ \frac{1}{2} \text{ int.} \\ \text{arc} \end{array} \right\}$$

$$x = y \quad \text{subst.}$$



$$y = 40 \quad \text{inscribed } \angle s \\ = \frac{1}{2} \text{ int. arc}$$

$$x = 40 \quad \angle \text{ formed} \\ \text{by chord \& } \\ \text{tangent} = \\ \frac{1}{2} \text{ int arc}$$

$$x = y \quad \text{subst.}$$

$$\triangle \underline{ABC} \sim \triangle \underline{ADE}$$

$$\frac{AB}{AD} = \frac{BC}{DE}$$

similar Δ s
have proportional
side lengths

$$AB \cdot DE = AD \cdot BC \quad \text{cross multiply}$$