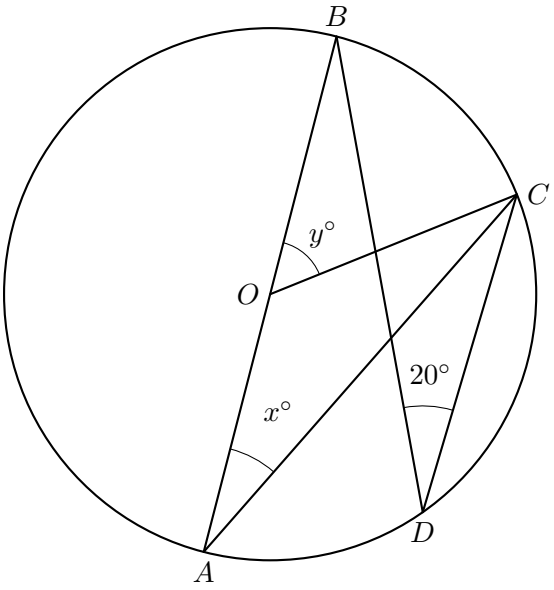
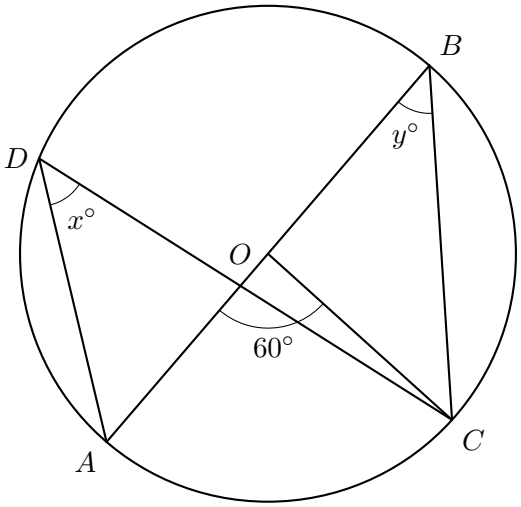
# Quick Review - Circle Geometry & Triangles

*Mr. Merrick · February 19, 2026*

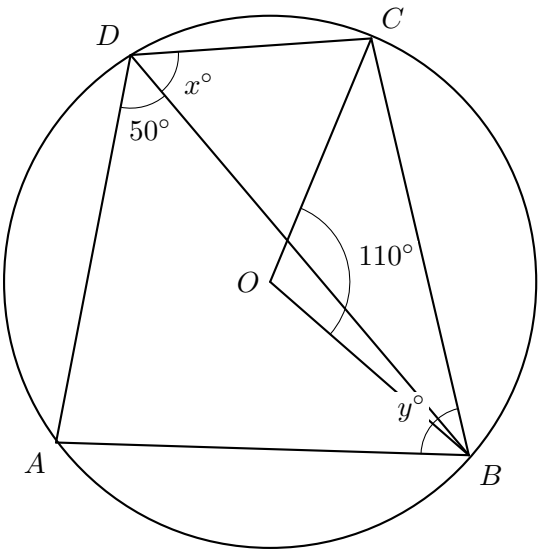
*This packet is a **quick** review of circle geometry. You should do more practice if you feel you need a more comprehensive review.*

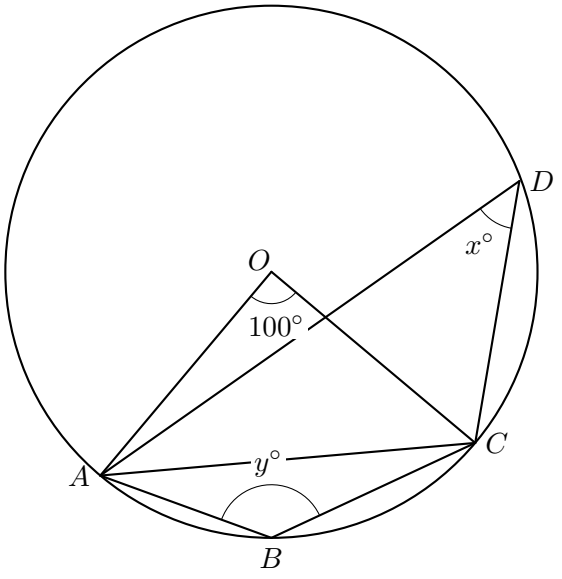
Given that $O$ is the center of thee circle and $AOB$ is a straight line, find the value of $x$ and $y$ in each case:



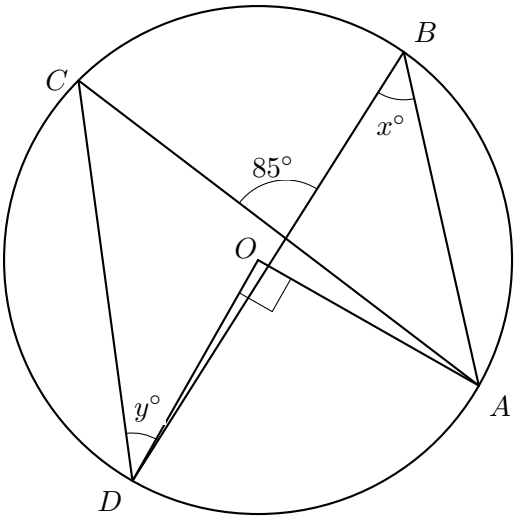



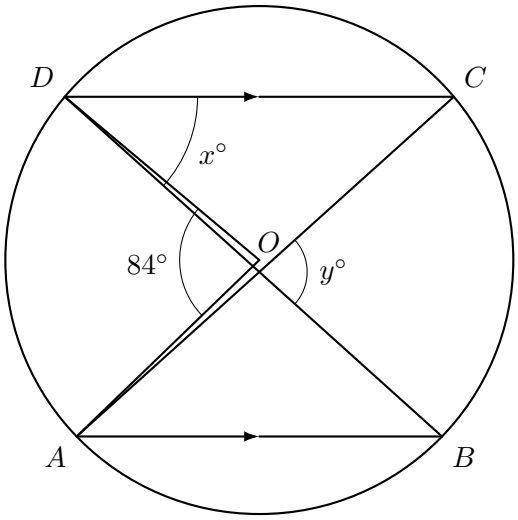

Given that $O$ is the center of the circle, find the value of $x$ and $y$ in each case:



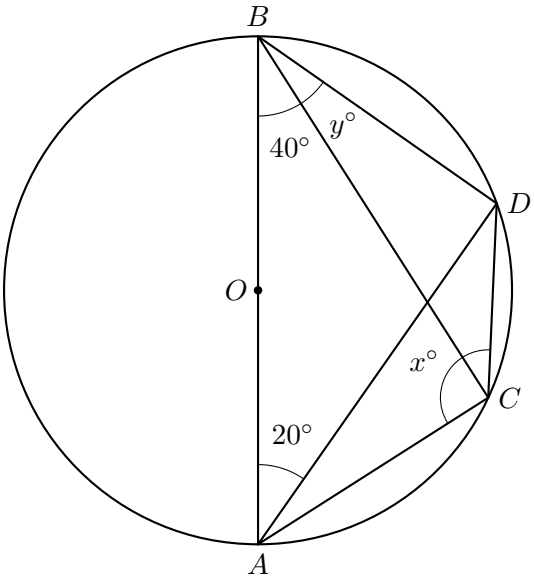



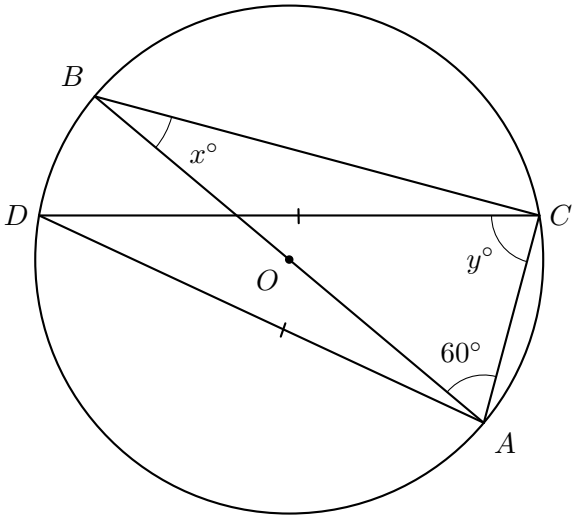
Given that $O$ is the center of the circle, find the value of $x$ and $y$ in each case:



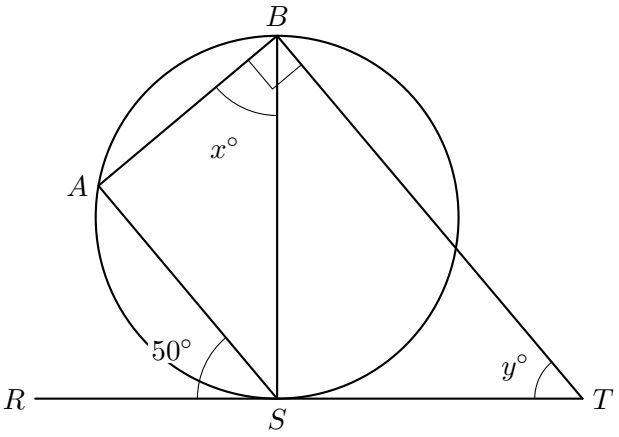



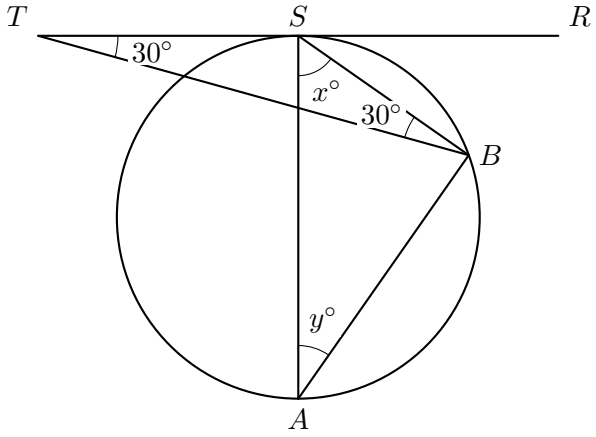

Given that $O$ is the center of the circle and $AOB$ is a straight line, find the value of $x$ and $y$ in each case:



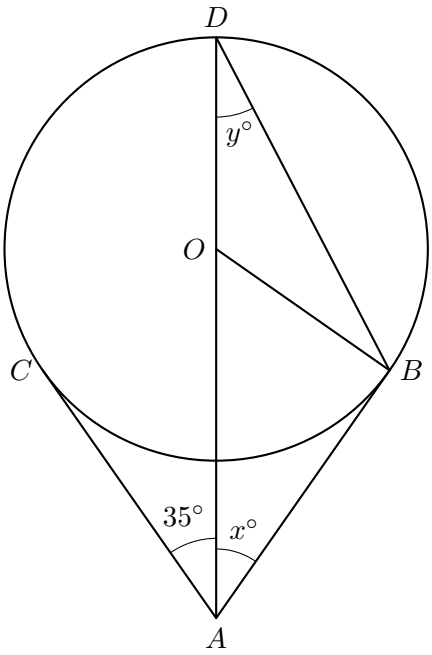



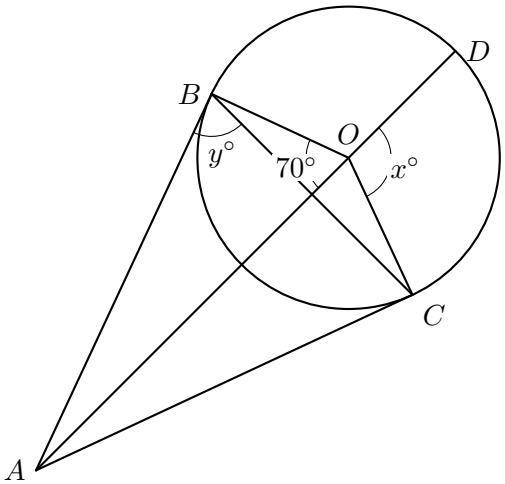
Given that $RST$ is the tangent to the circle at $S$, find the value of $x$ and $y$ in each case:



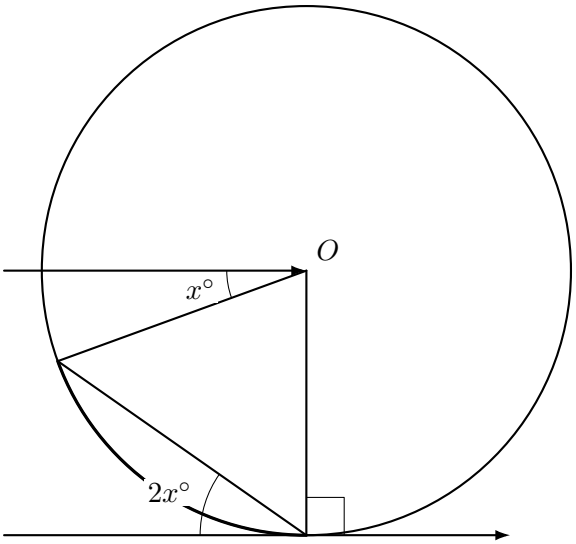



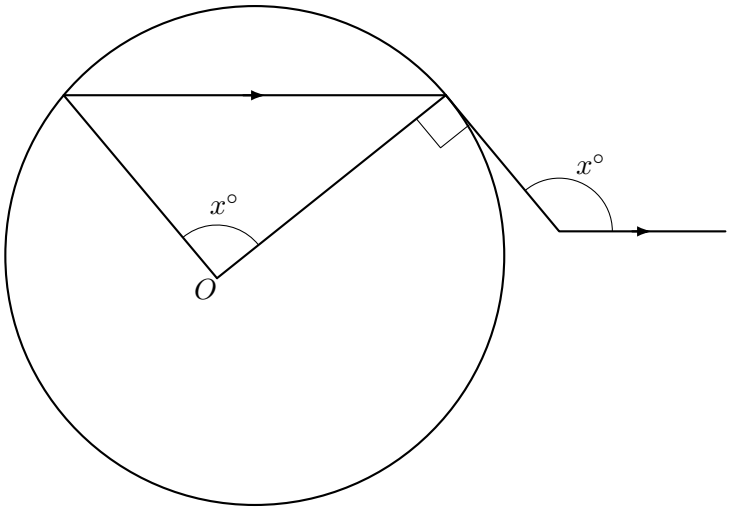

Given that $O$ is the center of the circle, $AOD$ is a straight line and $AB$ and $AC$ are tangents to the circle at $B$ and $C$ respectively, find the value of $x$ and $y$ in each case.

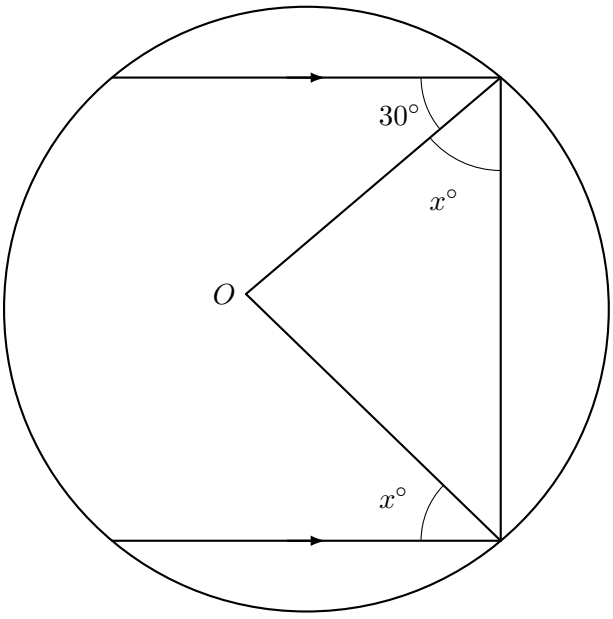


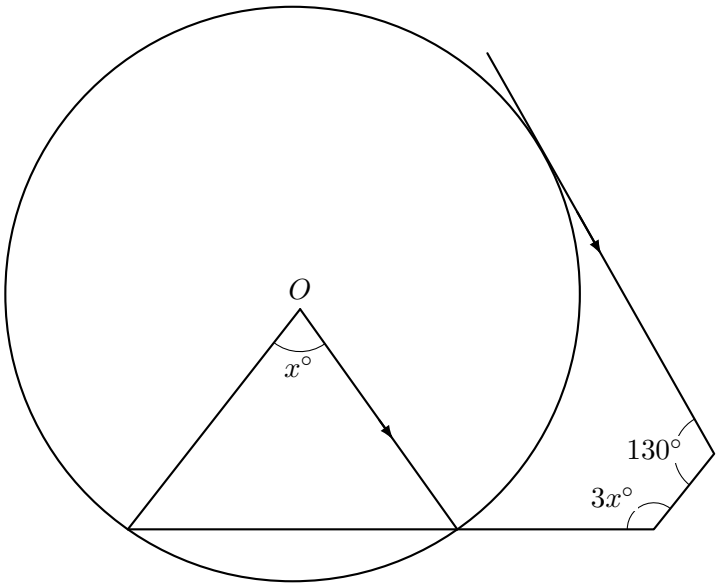



In each figure $O$ is the center of the circle. Form an equation in $x$ and solve the equation.



For each, construct *all possible* triangles with the information given.

(a) $\triangle ABC,\ AB = 3$ cm, $BC = 2$ cm, $AC = 3$ cm

**Solution:** Exactly one triangle (SSS).

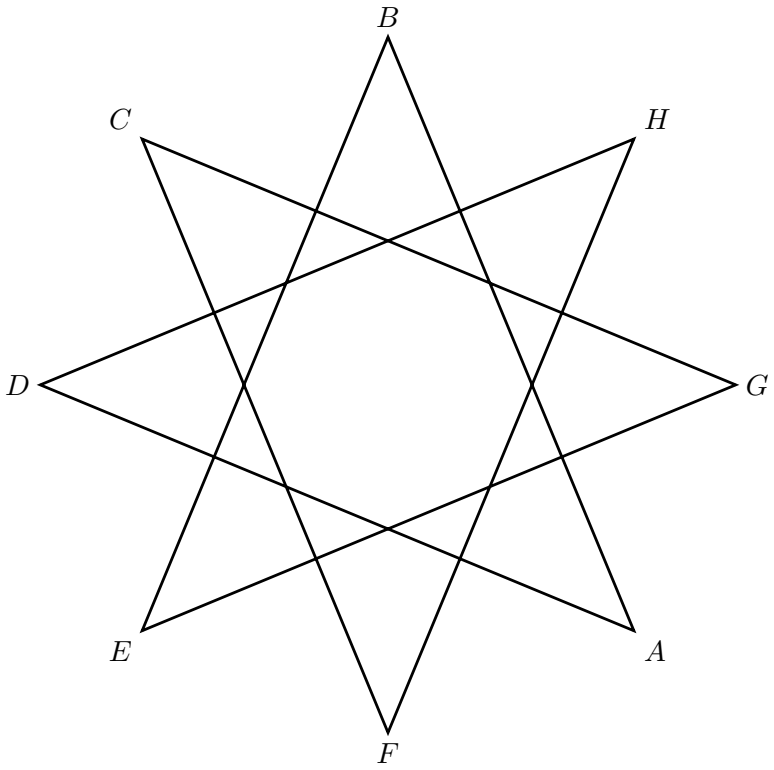
(b) $\triangle ABC,\ \angle BAC = 40°,\ BC = 6$ cm, $AC = 10$ cm

**Solution:** No triangle: $\sin B = \dfrac{10 \sin 40°}{6} > 1$.

(c) $\triangle ABC,\ \angle BCA = 33°,\ AB = 6$ cm, $AC = 10$ cm

**Solution:** Two triangles (SSA ambiguous case).

Find the sum of angles $A, B, C, D, E, F, G$, and $H$.




**Solution:** $A + B + C + D + E + F + G + H = 360°$.