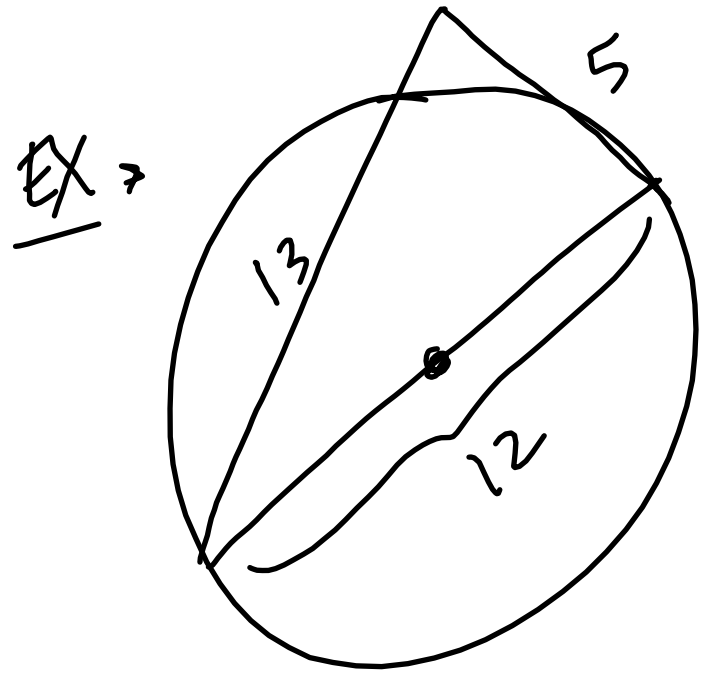


Secants/Chords/Tangents

- Tangents are perpendicular to diameter/radius

↳ To see if tangent is perpendicular, use Pythagorean Theorem



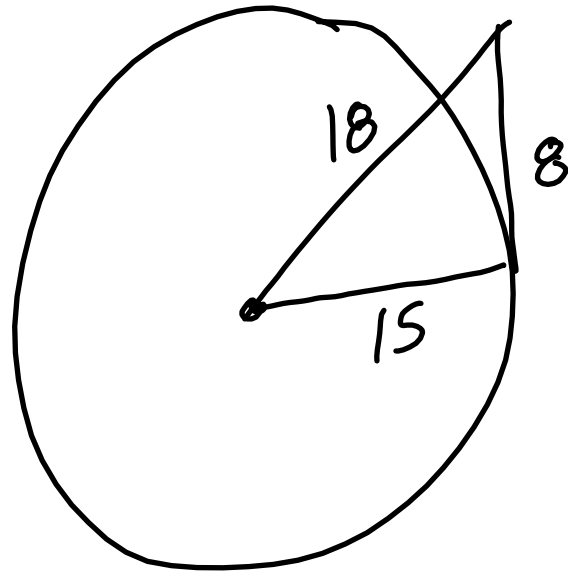
$$5^2 + 12^2 = 13^2$$

$$25 + 144 = 169$$

$$169 = 169 \checkmark$$

YES

EX →



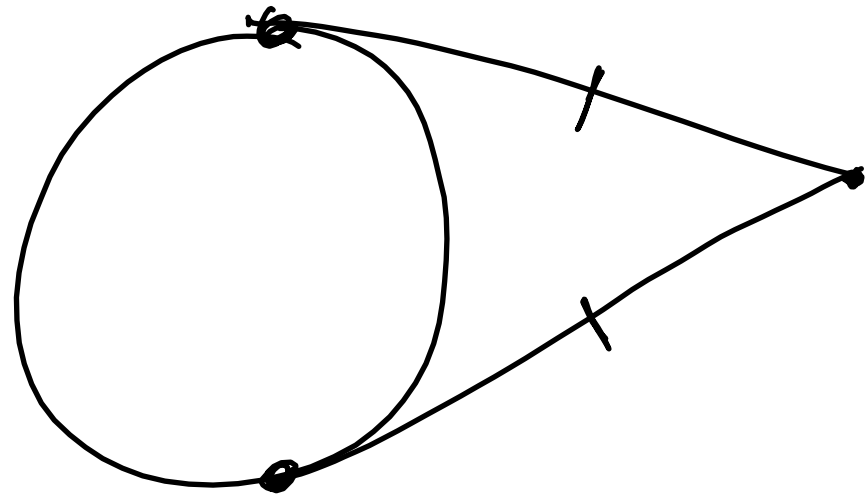
$$8^2 + 15^2 = 18^2$$

$$64 + 225 = 324$$

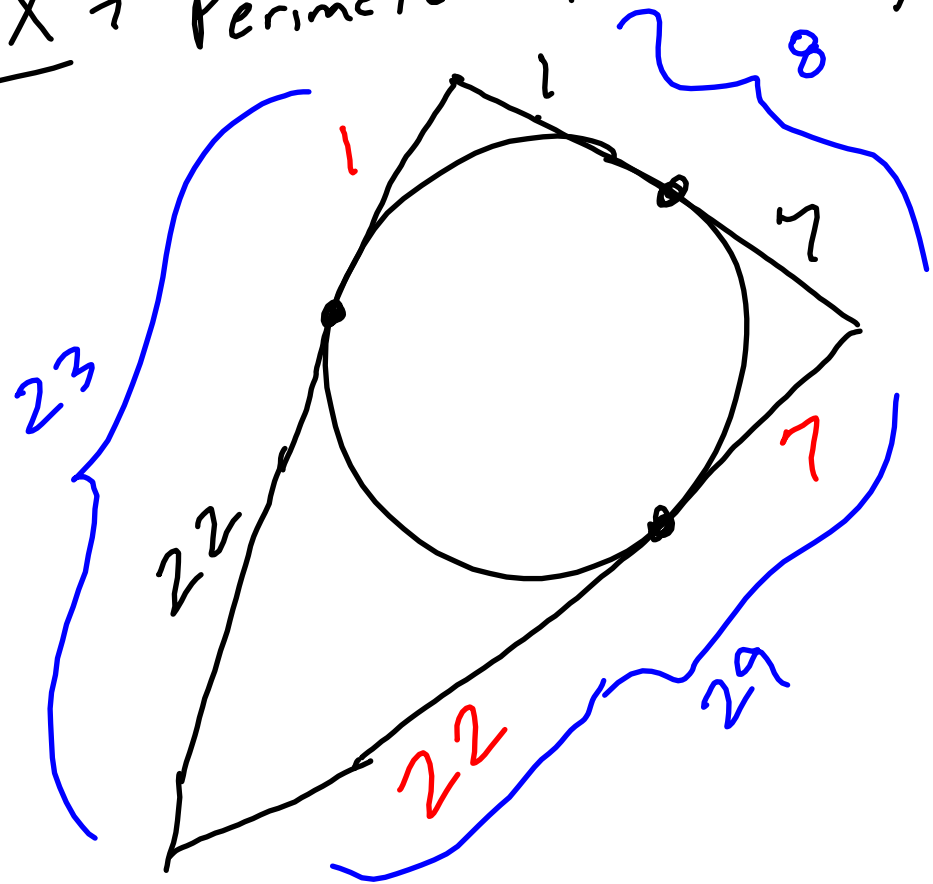
$$289 \neq 324$$

NO

- Tangent segments that intersect are the same length from their respective tangent point

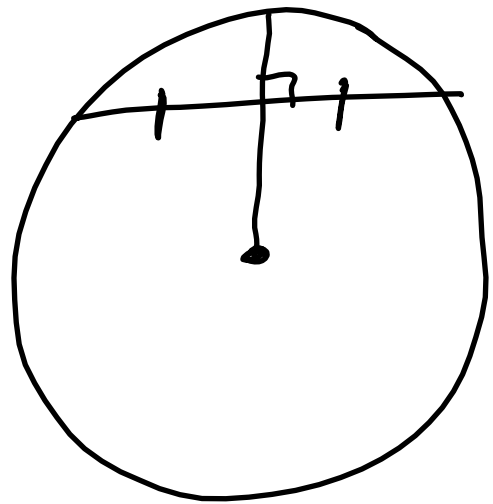


EX \rightarrow Perimeter of triangle = ?

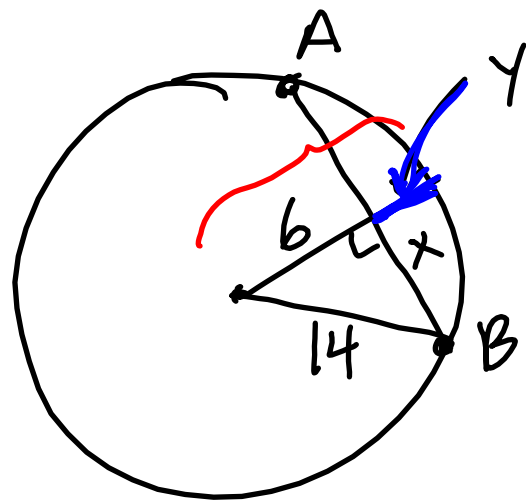


$$23 + 8 + 29 = 60$$

- Radii that are perpendicular to a chord bisect the chord



EX \rightarrow



$$6^2 + x^2 = 14^2$$

$$36 + x^2 = 196$$

$$x^2 = 160$$

$$x = \sqrt{160}$$

$$x = \sqrt{16} \cdot \sqrt{10}$$

$$\boxed{x = 4\sqrt{10}}$$

$$AB = 2 \cdot 4\sqrt{10}$$

$$\boxed{AB = 8\sqrt{10}}$$

$$6 + y = 14$$

$$\boxed{y = 8}$$