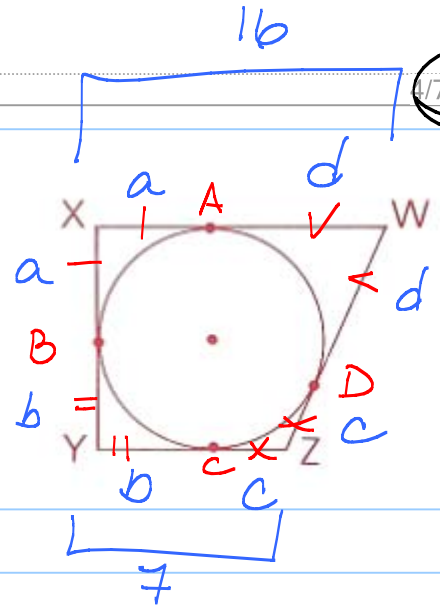


11 Trapezoid WXYZ is circumscribed about circle O. $\angle X$ and $\angle Y$ are right \angle s, $XW = 16$, and $YZ = 7$. Find the perimeter of WXYZ.

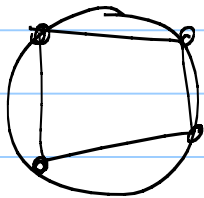


2-tan thm $\Rightarrow XA = XB$ etc

$$\begin{aligned}
 &2a + 2b + 2c + 2d \\
 &2(a + b + c + d) \\
 &2(a + d + b + c) \\
 &2(16 + 7) \\
 &2(23) \\
 &46
 \end{aligned}$$

$G: XW = 16 \ \& \ YZ = 7$
 $\underline{a + d = 16} \quad \underline{b + c = 7}$

15



Quad inscrib \Rightarrow opp \angle s supp

$$\begin{aligned}
 x^2 + 100 - 2x &= 180 \\
 x^2 - 2x - 80 &= 0 \\
 (x - 10)(x + 8) &= 0 \\
 x &= 10 \text{ or } -8
 \end{aligned}$$

x^2	100	64
$\angle Q: 100 - 2x$	80	116

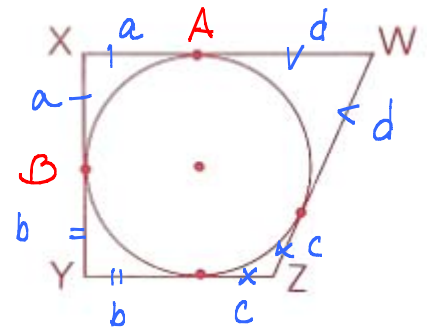
FTA: degree = # sol.

Common Error

$$-3^2 \neq (-3)^2$$

$$-9 \neq 9$$

11 Trapezoid WXYZ is circumscribed about circle O. $\angle X$ and $\angle Y$ are right \angle s, $XW = 16$, and $YZ = 7$. Find the perimeter of WXYZ.



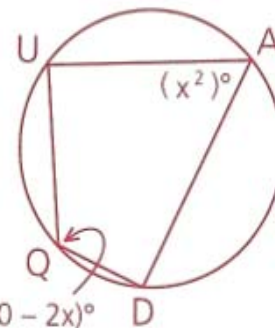
2 tan θ num \Rightarrow $XA = XB$ etc.

$$\begin{aligned} \text{Perimeter} &= 2a + 2b + 2c + 2d \\ &= 2(a + b + c + d) \\ &= 2(a + d + b + c) \\ &= 2(16 + 7) \\ &= 2(23) \\ &= 46 \end{aligned}$$

$$\begin{aligned} G: XW &= 16 & \& \quad YZ = 7 \\ \underline{a + d} &= 16 & \quad \underline{b + c} &= 7 \end{aligned}$$

15 Given the figure shown, find $m\angle Q$.

Inscribed Quad \Rightarrow opp \angle s supp



$$\angle A + \angle Q = 180$$

$$x^2 - 2x + 100 = 180 \quad (100 - 2x)^\circ$$

$$x^2 - 2x - 80 = 0$$

$$(x - 10)(x + 8) = 0$$

$$x = 10 \text{ or } x = -8$$

$\angle Q = 100 - 2x$	80	116
$\angle A = x^2$	100	64

Fundamental Theorem of Algebra:
degree = number of solutions