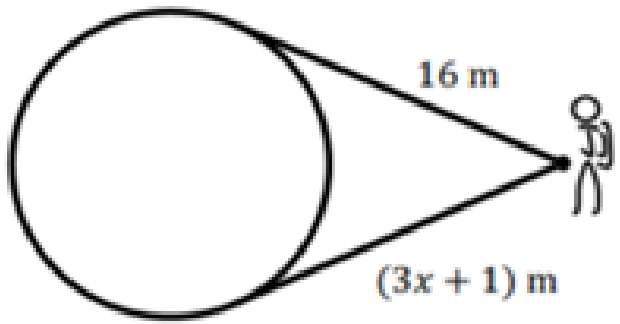
4. George is standing in front of a silo and can only see as far as the diagram shows. Determine the value of x. Support your conclusion with a theorem.



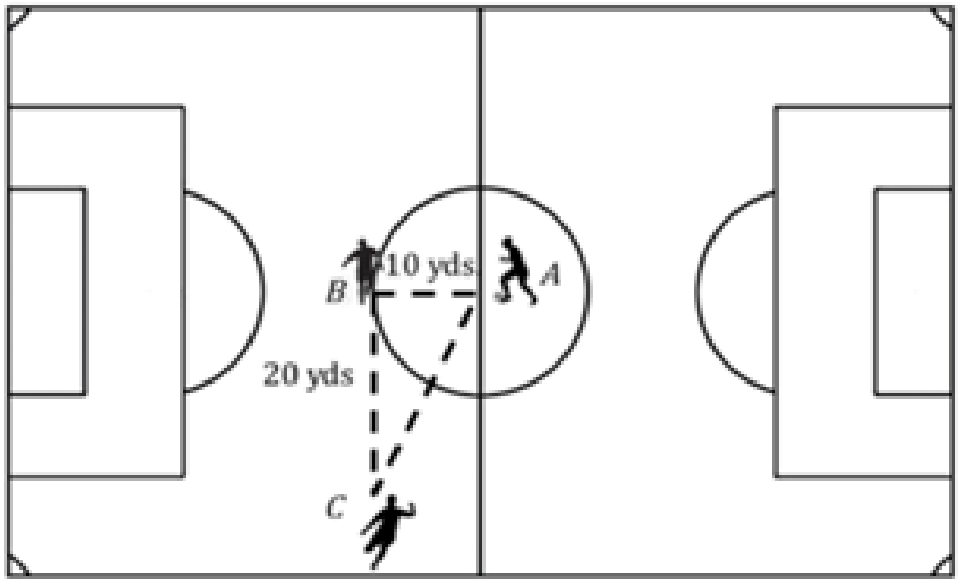
$16 = 3x + 1$

$15 = 3x$

$5 = x$

Try It!

5. Three teammates from a local soccer club are practicing passing in triangular pattern as shown in the diagram below.



Player *A* has the ball and is 10 yards from Player *B*, who is 20 yards from Player *C*. How far would the ball travel if Player *A* decides to pass the ball to Player *C*? Justify your answer.

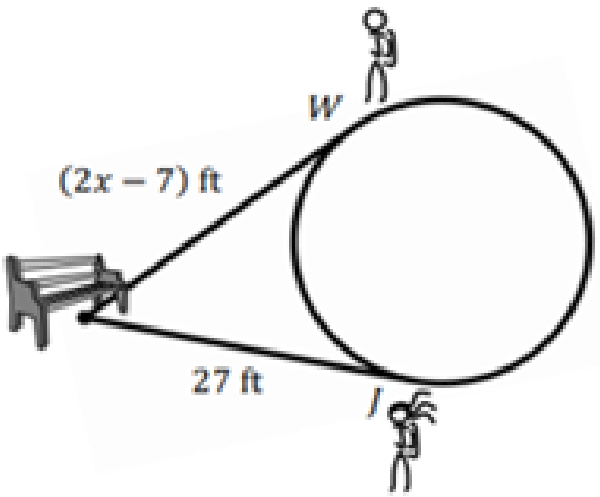
$10^2 + 20^2 = c^2$

$100 + 400 = c^2$

$\sqrt{500} = \sqrt{c^2}$

22.4 yd

6. Jasmyn is standing at the point of tangency to a wishing well, 27 feet from a bench. Her friend Willard is at the other point of tangency. Determine the value of x.



$2x - 7 = 27$

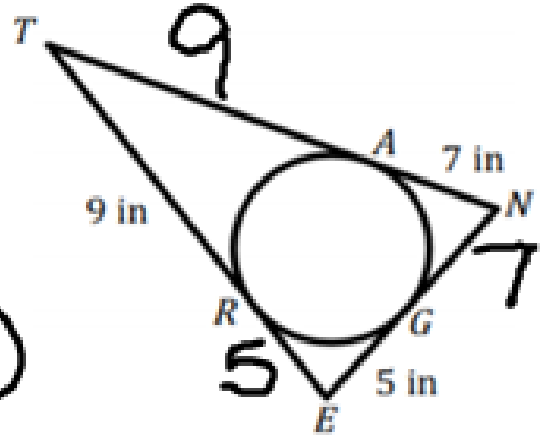
$2x = 34$

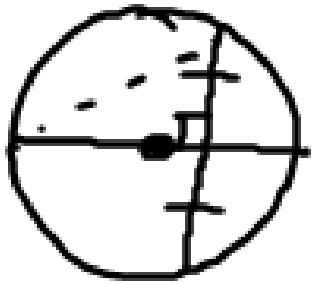
$x = 17$

7. Find the perimeter of the ΔNET in the diagram below. Points A, R, and G are points of tangency. Justify your answer.

$18+10+14$

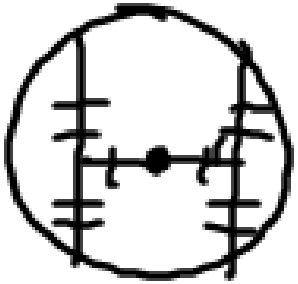
42 in





Perpendicular to a chord theorem

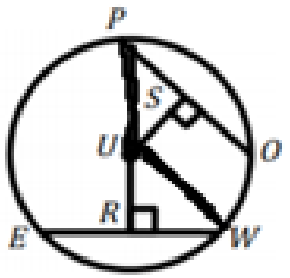
f the diameter of a circle is perendicular to a chord, then the diameter bisects the chord.



Chords distance to a center theorem

n Congruent circles or the same circle, chords are congrdent if and only if they are equidistance from the center

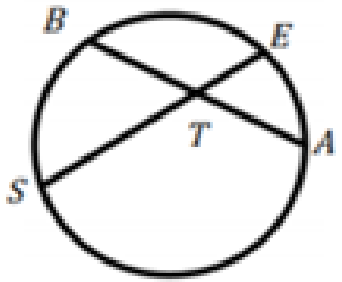
How could we prove the Chords Distance to Center Theorem using the figure below, where $\overline{EW} \cong \overline{PO}$ if and only if $\overline{UR} \cong \overline{US}$?



Show $\overline{PU} \cong \overline{UW}$ by Pythagorean Theorem
Show $\triangle s \cong$ & then use CPCTC

Intersecting Theorem

If two chords intersect on the interior of a circle, then the product of the lengths of the segments of one chord is equal to the product of the lengths of the segments of the other chord.



$AT(TB) = ST(TE)$