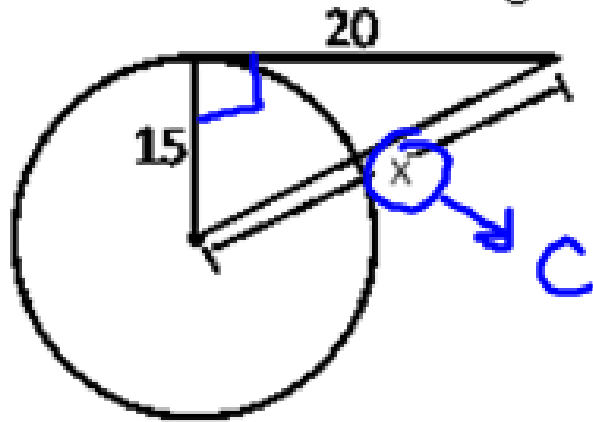


1. Find x . Assume that segments that appear to be tangent are tangent.



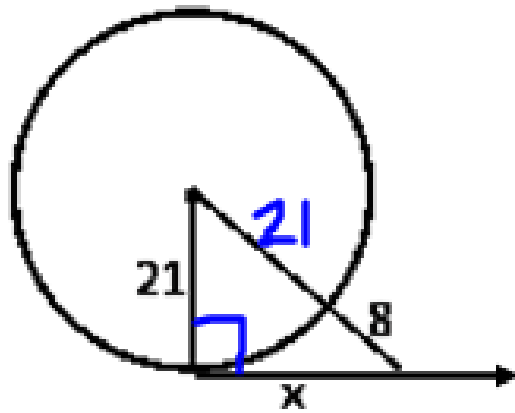
$$15^2 + 20^2 = x^2$$

$$225 + 400 = x^2$$

$$\sqrt{625} = \sqrt{x^2}$$

$$25 = x$$

1. Find x . Assume that segments that appear to be tangent are tangent.



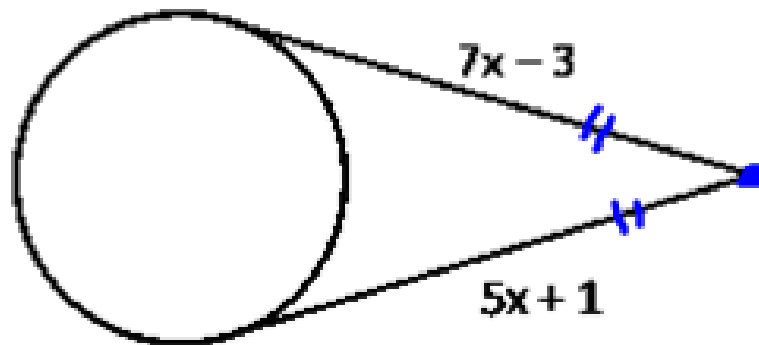
$$21^2 + x^2 = 29^2$$

$$\begin{array}{r} 441 + x^2 = 841 \\ -441 \qquad -441 \\ \hline x^2 = 400 \end{array}$$

$$\sqrt{x^2} = \sqrt{400}$$

$$x = 20$$

1. Find x . Assume that all segments that appear to be tangent are tangent.



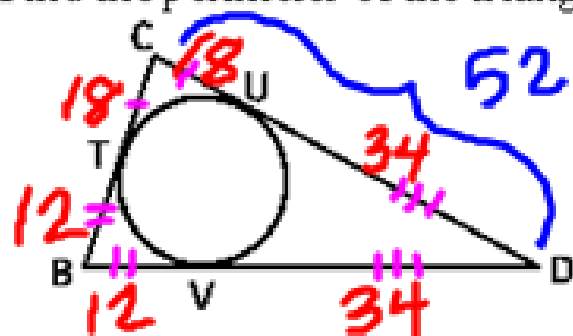
$$\begin{array}{r} 7x - 3 = 5x + 1 \\ -5x \quad -5x \end{array}$$

$$\begin{array}{r} 2x - 3 = 1 \\ +3 \quad +3 \end{array}$$

$$\begin{array}{r} 2x = 4 \\ \div 2 \quad \div 2 \end{array}$$

$$x = 2$$

1. Find the perimeter of the triangle from the given information: $CD = 52$, $CU = 18$, $TB = 12$

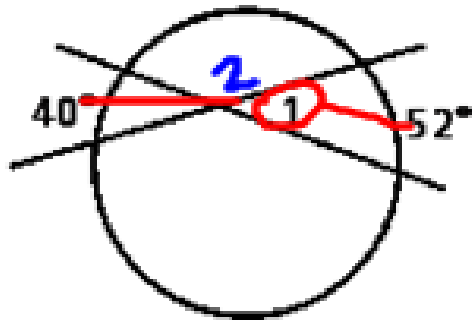


$$\begin{array}{r} 52 \\ - 18 \\ \hline 34 \end{array}$$

$$\boxed{128}$$

Find the measure of the marked angle.

1.

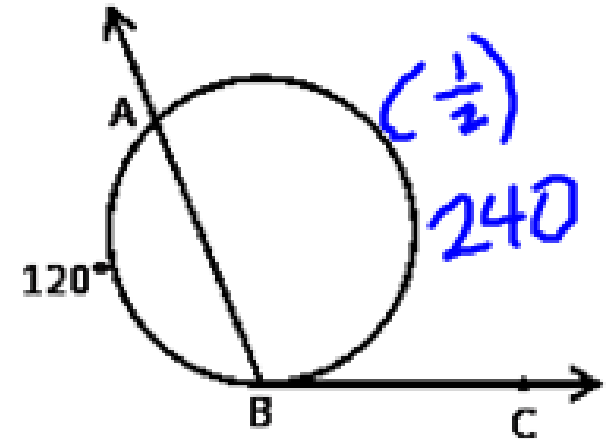


$$40 + 52 = 92$$

$$\frac{92}{2} = 46^\circ$$

$$\angle 2 = 134^\circ$$

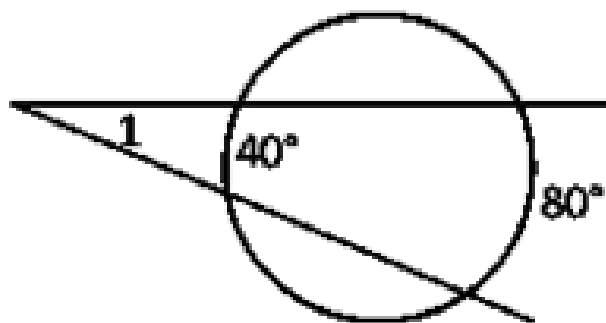
6.



$$\begin{array}{r} 360 \\ - 120 \\ \hline 240 \end{array}$$

$$120^\circ$$

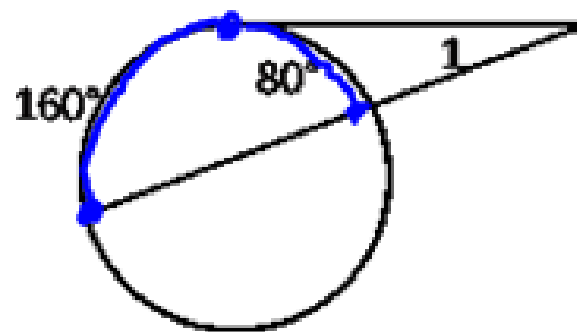
7.



$$80 - 40 = 40$$

$$\frac{40}{2} = \textcircled{20^\circ}$$

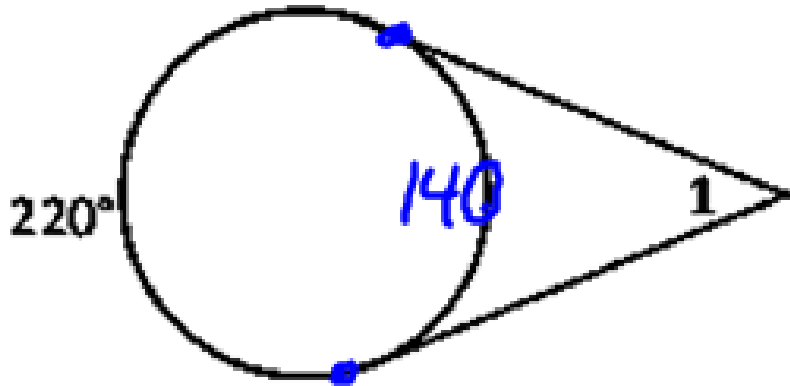
8.



$$160 - 80 = 80$$

$$\frac{80}{2} = \textcircled{40^\circ}$$

9.



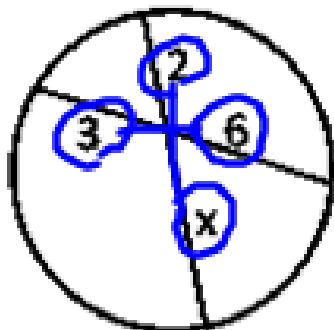
$$\begin{array}{r} 360 \\ - 220 \\ \hline 140 \end{array}$$

$$220 - 140 = 80$$

$$\frac{80}{2} = 40^\circ$$

Find x to the nearest tenth.

10.



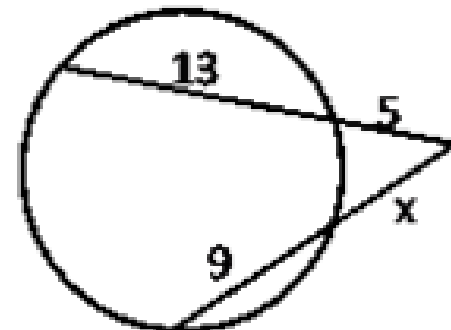
$$2x = 3 \cdot 6$$

$$\frac{2x}{2} = \frac{18}{2}$$

$$x = 9$$

$$\frac{15}{6}$$

11.



$$18 \cdot 5 = (x+9) \cdot x$$

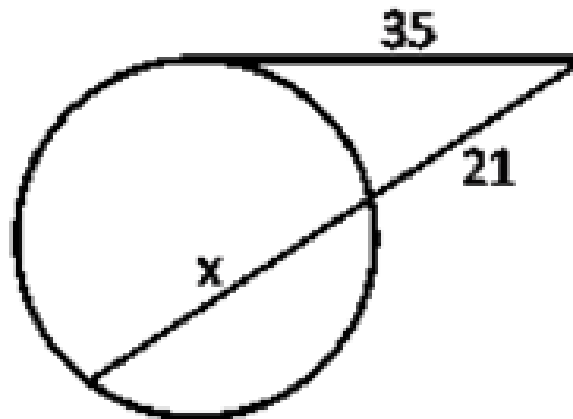
$$90 = x^2 + 9x$$
$$-90 \quad -90$$

$$0 = x^2 + 9x - 90$$

$$0 = (x+15)(x-6)$$

$$x \neq -15 \quad x = 6$$

12.



$$(x+21) \cdot 21 = 35^2$$

$$\begin{array}{r} 21x + 441 = 1225 \\ - 441 \quad - 441 \\ \hline \end{array}$$

$$\begin{array}{r} 21x = 784 \\ \hline 21 \end{array}$$

$$x = 37.3$$

Write an equation for each circle.

13. center at $(-2, 6)$, diameter = 8

$$(x+2)^2 + (y-6)^2 = 16$$

$\rightarrow r=4$

14. Endpoints of a diameter are $(-4, -6)$ and $(2, 6)$

$$\left(\frac{-4+2}{2}, \frac{-6+6}{2} \right) = (-1, 0)$$

$$\sqrt{(-1-2)^2 + (0-6)^2} = \sqrt{9+36} = \sqrt{45}$$

$$(x+1)^2 + y^2 = 45$$

$$(x+1)^2 + (y-0)^2 = 45$$



15. Graph the circle with equation $(x + 2)^2 + (y - 3)^2 = 16$

center: $(-2, 3)$

radius: 4

