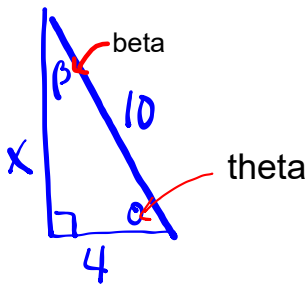


Find the measure of the missing side and angles.



$$\begin{aligned} a^2 &= c^2 - b^2 \\ x^2 &= 10^2 - 4^2 \\ &= 100 - 16 \\ &= 84 \\ x &= \sqrt{84} \\ &= 9.2 \end{aligned}$$

$$\begin{aligned} \cos \theta &= \frac{\text{adj}}{\text{hyp}} \\ &= \frac{4}{10} \end{aligned}$$

$$\begin{aligned} \theta &= \cos^{-1} 0.4 \\ &= 66^\circ \end{aligned}$$

$$\begin{aligned} \beta &= 180 - 90 - 66 \\ &= 24^\circ \end{aligned}$$

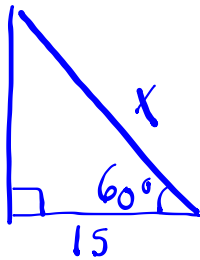
or \rightarrow

$$\begin{aligned} \sin \beta &= \frac{4}{10} \\ \beta &= \sin^{-1}(0.4) \\ &= 24^\circ \end{aligned}$$

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Solve for x.

SOH CAH TOA



$$\cos \theta = \frac{\text{adj}}{\text{hyp.}}$$

$$\cos 60^\circ = \frac{15}{x}$$

$$\frac{x \cos 60^\circ}{\cos 60^\circ} = \frac{15}{\cos 60^\circ}$$

$$x = 30$$

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Calculating the answer without rounding until the end.

$$\frac{12}{\cos 53} = 19.94$$

Two methods...

1. Some calculators are straight forward.

$$12 \div \cos 53 =$$

2. Other calculators...method two.

$$53 \boxed{\cos} \boxed{y^x} -1 \times 12$$

bottom
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