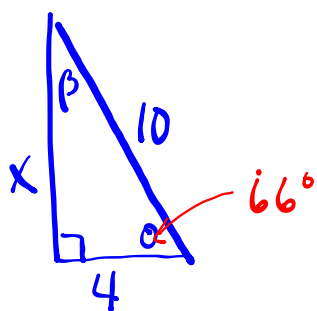


Find the measure of the missing side and angles.

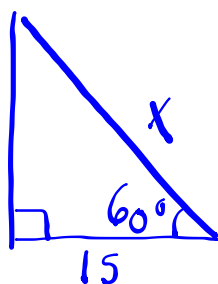


$$\begin{aligned}
 a^2 &= c^2 - b^2 \\
 &= 10^2 - 4^2 \\
 &= 100 - 16 \\
 a &= \sqrt{84} \\
 &= 9.2
 \end{aligned}$$

$$\begin{aligned}
 \cos \theta &= \frac{\text{adj}}{\text{hyp}} \\
 &= \frac{4}{10} \\
 \theta &= \cos^{-1} 0.4 \\
 &= 66^\circ
 \end{aligned}$$

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

Solve for x.



SOH CAH TOA

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

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

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

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

$$= \frac{15}{0.5}$$

$$= 30$$

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. method two...

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

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