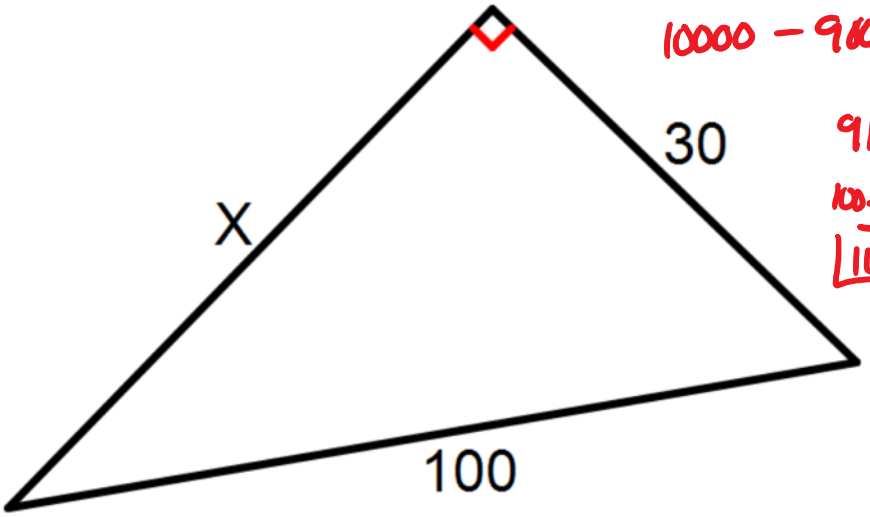
Test Review

Monday, September 23, 2019 7:46 AM

Without a Calculator

Find the exact value for x.



$100^2 - 30^2 = x^2$

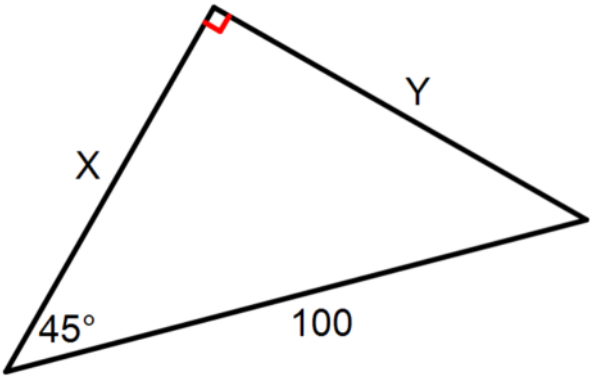
$10000 - 900 = x^2$

$9100 = x^2$

100.91

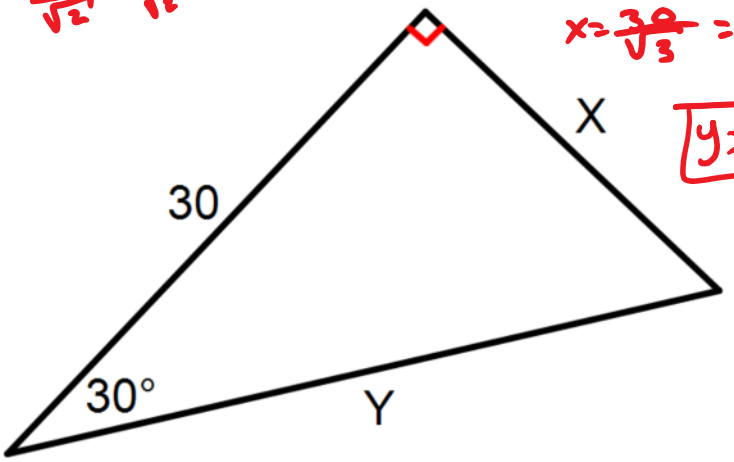
$10\sqrt{91} = x$

Find the exact value for x and y.



$X = Y = \frac{100}{\sqrt{2}}$

$\frac{100}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{100\sqrt{2}}{2} = 50\sqrt{2}$



$30 = x\sqrt{3}$

$x = \frac{30}{\sqrt{3}} = 10\sqrt{3}$

$y = 20\sqrt{3}$

What are the trig ratios

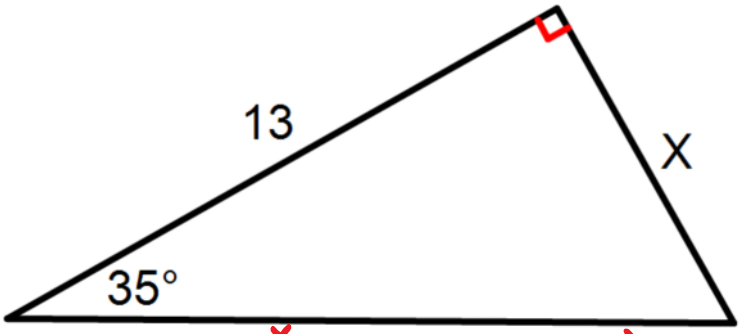
$\sin(x) = \frac{opp}{hyp}$

Cos(x)= $\frac{\text{Adj.}}{\text{Hyp.}}$

Tan(x)= $\frac{\text{opp.}}{\text{Adj.}}$

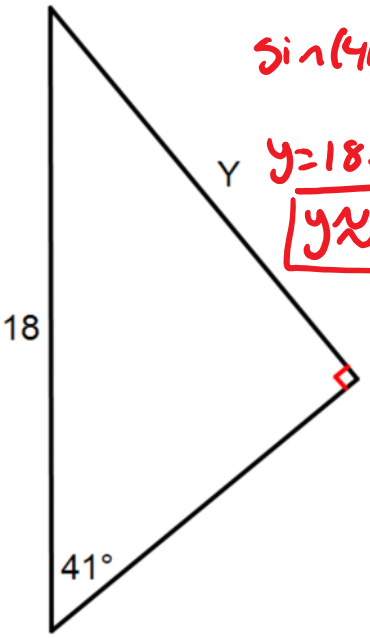
With a Calculator

Find the missing variable. Round your answer to the nearest tenth.



$\tan(35°)=\frac{x}{13}$ $x=13\cdot\tan(35°)$

$x\approx 9.1$

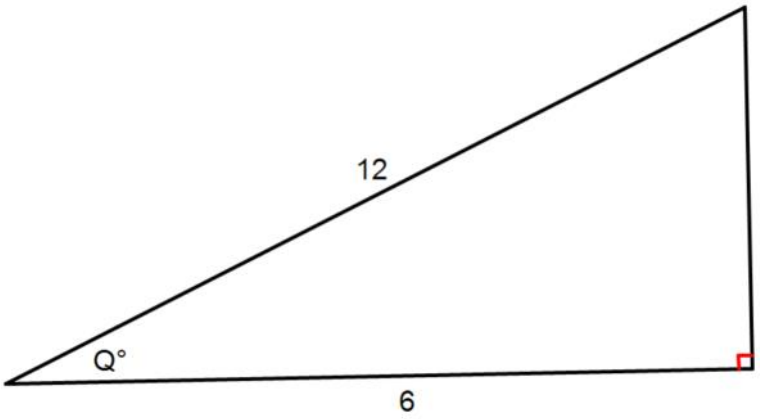


$\sin(41°)=\frac{y}{18}$

$y=18\cdot\sin(41°)$

$y\approx 11.8$

Find the measure of the angle. Round your answer to the nearest tenth.

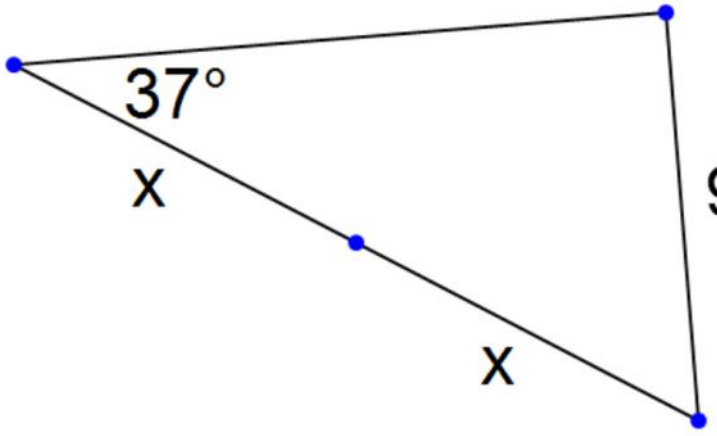


$\cos(Q)=\frac{6}{12}$

$Q=\cos^{-1}\left(\frac{1}{2}\right)$

$Q\approx 60°$

Find the value of x to the nearest tenth.

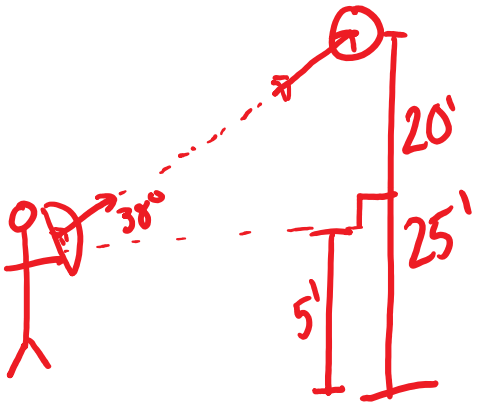


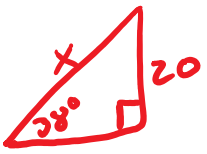
$\sin(37°) = \frac{9}{2x}$

$x = \frac{9}{2 \cdot \sin(37°)}$

$x \approx 7.5$

You are standing on the ground and shoot an arrow at a target that is 25 feet in the air. If you shoot the arrow at a 38° angle, how far does the arrow travel? (Assume the arrow is released 5 feet from the ground.)



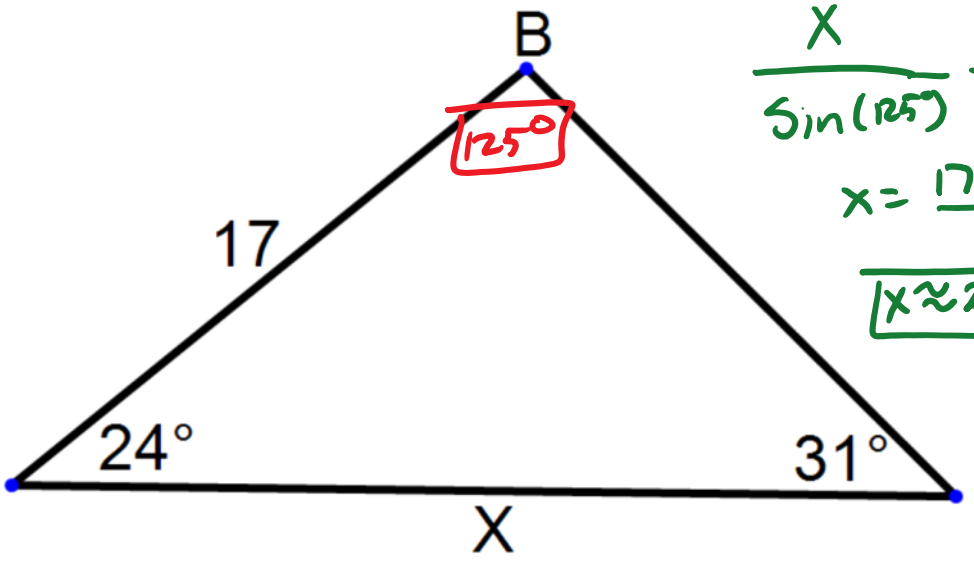


$\sin(38°) = \frac{20}{x}$

$x = \frac{20}{\sin(38°)}$

$x \approx 32.5$

Find the measure of angle B and the length of X to the nearest tenth.

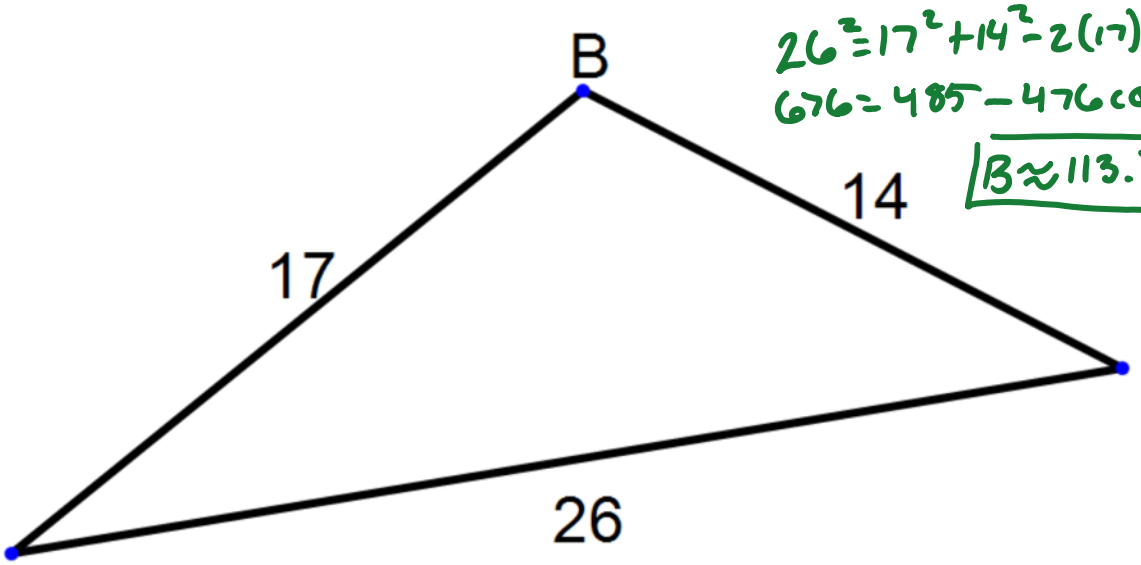


$$\frac{X}{\sin(125)} = \frac{17}{\sin(31°)}$$

$$X = \frac{17 \cdot \sin(125°)}{\sin(31°)}$$

$$X \approx 27.0$$

Find the measure of angle B to the nearest tenth.



$$26^2 = 17^2 + 14^2 - 2(17)(14)\cos(B)$$

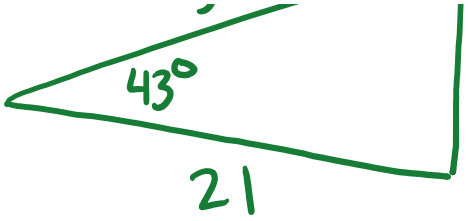
$$676 = 485 - 476\cos(B)$$

$$B \approx 113.7°$$

If one side of a triangle is 32, and another side is 21 and the angle connecting them is 43°, what is the area of the triangle?

$$A = \frac{1}{2} \cdot 32 \cdot 21 \cdot \sin(43°)$$

$$A \approx 229.2$$



$A \approx 229.2$
