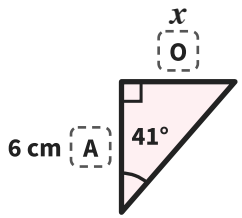
Trigonometry: Finding a Side with Tan

1

Find x to 2 decimal places.



$\tan \boxed{41}° = \dfrac{\boxed{x}}{\boxed{6}}$

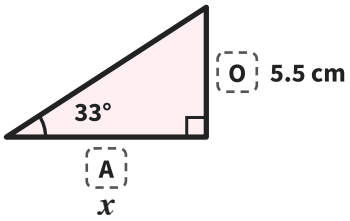
Make the unknown the subject of the formula.

$x = 6 \times \tan 41°$

$x =$ _____

2

Find x to 2 decimal places.



$\tan \boxed{33}° = \dfrac{\boxed{5.5}}{\boxed{x}}$

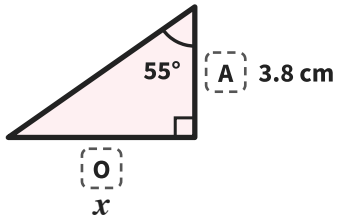
Make the unknown the subject of the formula.

_____

$x =$ _____

3

Find x to 2 decimal places.



$\tan \boxed{}° = \dfrac{\boxed{}}{\boxed{}}$

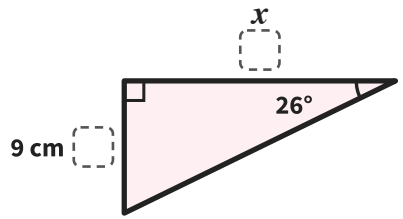
Make the unknown the subject of the formula.

_____

$x =$ _____

4

Label O and A, then find x to 2 decimal places.



$\tan \boxed{}° = \dfrac{\boxed{}}{\boxed{}}$

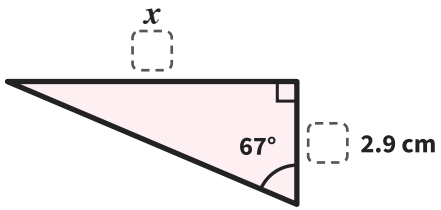
Make the unknown the subject of the formula.

_____

$x =$ _____

5

Label O and A, then find x to 2 decimal places.



$\tan \boxed{}° = \dfrac{\boxed{}}{\boxed{}}$

Make the unknown the subject of the formula.

_____

$x =$ _____

6

The opposite is 9 cm and the angle is 70°. To find the adjacent, Ava works out $9 \times \tan 70°$ and gets 24.73 cm. Explain Ava's mistake, then find the adjacent to 2 decimal places.

_____

_____

Answer _____

7

A rocket rises straight up from its launch pad. Ellie stands 120 m from the pad. When she looks up at the rocket at 52° to the ground, how high is it? Give your answer to 2 decimal places.

_____

_____

Answer _____

8

A street lamp is 6.5 m tall. Zoe looks up at the top of it at 23° above the ground. How far is she from the bottom of the lamp? Give your answer to 2 decimal places.

_____

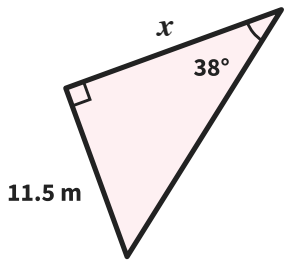
_____

Answer _____

Trigonometry: Finding a Side with Tan *further practice*

9

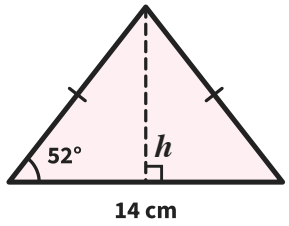
Find x to 2 decimal places.



x = _____

10

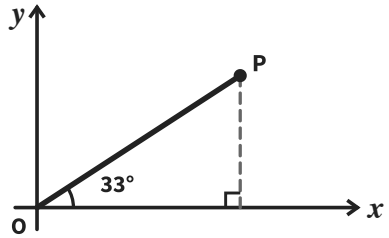
The triangle is isosceles and its base is 14 cm. Find its height, h, to 2 decimal places.



h = _____

11

OP makes an angle of 33° with the x axis, and P has x coordinate 9. Find the y coordinate of P, to 2 decimal places.



y = _____

12

Max looks up at the top of a wind turbine at 17° above the level ground. The turbine is 85 m tall. How far is Max from its base? Give your answer to 2 decimal places.

Answer _____

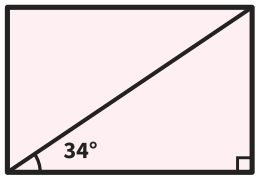
13

A spotlight on the floor is 5 m from a wall that is 7.5 m tall. It points up at 55° to the floor. Does its beam hit the wall, or go over the top?
Show how you know.

Answer _____

14

The diagonal of this rectangle makes an angle of 34° with its 12 cm side. Find the area of the rectangle, to 2 decimal places.



Area _____

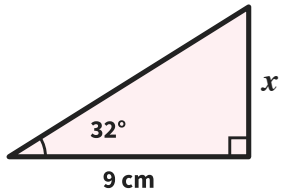
15

From the same spot, Kai looks up at the tops of two trees. Tree A is 25 m away, seen at 31°. Tree B is 40 m away, seen at 21°. Which tree is taller, and by how much? Give your answer to 2 decimal places.

Answer _____

16

Sam writes $\tan 32° = \frac{9}{x}$, so **x = 14.40 cm**. Explain Sam's mistake. Then find x to 2 decimal places.



x = _____