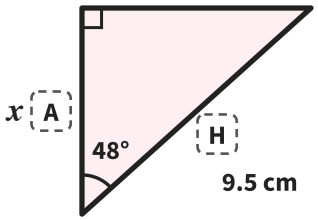
Trigonometry: Finding a Side with Cos

1

Find x to 2 decimal places.



$\cos$ [48] $^\circ = \frac{x}{9.5}$

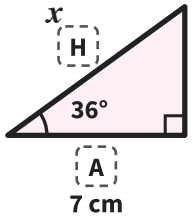
Make the unknown the subject of the formula.

$x = 9.5 \times \cos 48^\circ$

$x =$ _____

2

Find x to 2 decimal places.



$\cos$ [36] $^\circ = \frac{7}{x}$

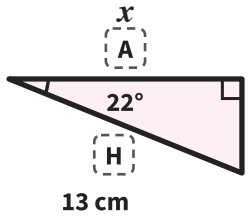
Make the unknown the subject of the formula.

_____

$x =$ _____

3

Find x to 2 decimal places.



$\cos$ [ ] $^\circ = \frac{\square}{\square}$

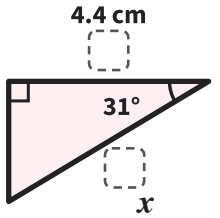
Make the unknown the subject of the formula.

_____

$x =$ _____

4

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



$\cos$ [ ] $^\circ = \frac{\square}{\square}$

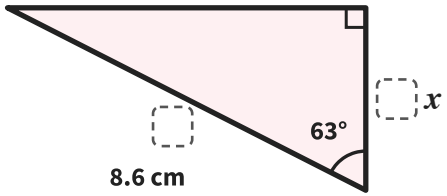
Make the unknown the subject of the formula.

_____

$x =$ _____

5

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



$\cos$ [ ] $^\circ = \frac{\square}{\square}$

Make the unknown the subject of the formula.

_____

$x =$ _____

6

The hypotenuse is 12 cm and the angle is 27°. To find the adjacent, Leo works out 12 × sin 27° and gets 5.45 cm. Explain Leo's mistake, then find the adjacent to 2 decimal places.

_____

_____

Answer _____

7

A swing hangs from chains 2.4 m long. It is pulled back so the chains make an angle of 35° with the vertical. How far below the top bar is the seat now? Give your answer to 2 decimal places.

_____

_____

Answer _____

8

A drawbridge is raised to 38° above the horizontal. Its far end is now 7.5 m from the hinge, measured horizontally. How long is the drawbridge? Give your answer to 2 decimal places.

_____

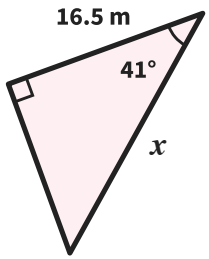
_____

Answer _____

Trigonometry: Finding a Side with Cos *further practice*

9

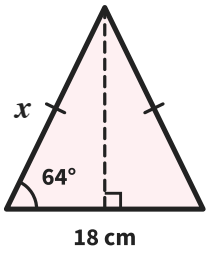
Find x to 2 decimal places.



$x =$ _____

10

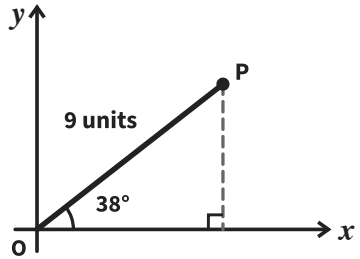
The triangle is isosceles and its base is 18 cm. Find the length of each of its equal sides, x, to 2 decimal places.



$x =$ _____

11

The line OP is 9 units long. It makes an angle of 38° with the x axis. Find the x coordinate of P, to 2 decimal places.



$x =$ _____

12

A hot air balloon is tied to the ground by a straight rope at 62° to the ground. The point directly below the balloon is 45 m from where the rope is tied.
How long is the rope? Give your answer to 2 decimal places.

Answer _____

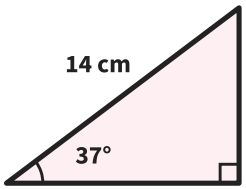
13

A straight ski lift cable is 850 m long and rises at 24° to the horizontal.
A map says the two stations are 760 m apart, measured horizontally.
Is the map right? Show how you know.

Answer _____

14

Find the perimeter of the triangle, to 2 decimal places.



Perimeter _____

15

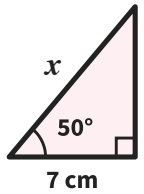
Boat A sails 18 km on a bearing of 040°.
Boat B sails 22 km on a bearing of 055°.
They start from the same harbour.
Which boat ends up further north, and by how much? Give your answer to 2 decimal places.

Answer _____

16

Sam writes $\cos 50° = \frac{x}{7}$, so **x = 4.50 cm.**

Explain how you know Sam is wrong.
Then find x to 2 decimal places.



$x =$ _____