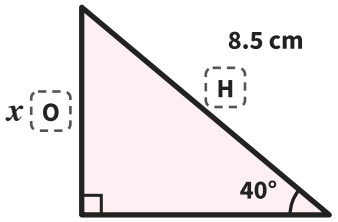
Trigonometry: sides and angles mixed

1

Find x to 2 decimal places.



$$\sin \boxed{40}^\circ = \frac{\boxed{x}}{\boxed{8.5}}$$

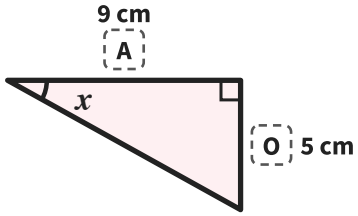
Make the unknown the subject of the formula.

$$x = 8.5 \times \sin 40^\circ$$

$x =$ _____

2

Find the angle x to 2 decimal places.



$$\tan x = \frac{\boxed{5}}{\boxed{9}}$$

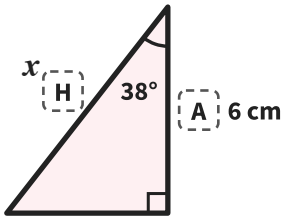
Use the inverse to find the angle.

_____

$x =$ _____

3

Find x to 2 decimal places.



$$\cos \boxed{}^\circ = \frac{\boxed{}}{\boxed{}}$$

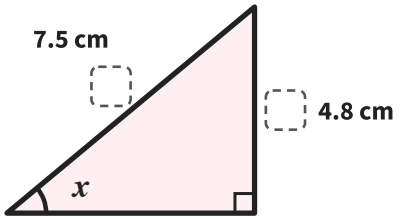
Make the unknown the subject of the formula.

_____

$x =$ _____

4

Label O and H, then find the angle x to 2 decimal places.



$$\boxed{}\, x = \frac{\boxed{}}{\boxed{}}$$

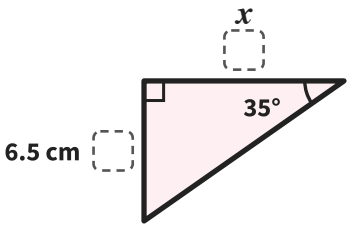
Use the inverse to find the angle.

_____

$x =$ _____

5

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



$$\tan \boxed{}^\circ = \frac{\boxed{}}{\boxed{}}$$

Make the unknown the subject of the formula.

_____

$x =$ _____

6

The adjacent is 5 cm and the hypotenuse is 8 cm. To find the angle, Leo types cos(5 ÷ 8), gets 0.99994 and says the angle is about 1°. Explain Leo's mistake, then find the angle to 2 decimal places.

_____

_____

Answer _____

7

A straight path crosses a rectangular park from one corner to the opposite corner. It makes an angle of 38° with the 120 m side of the park.
How long is the path? Give your answer to 2 decimal places.

_____

_____

Answer _____

8

A seesaw is 3.6 m long. One end is on the ground and the other end is 0.9 m above the ground. Find the angle between the seesaw and the ground.
Give your answer to 2 decimal places.

_____

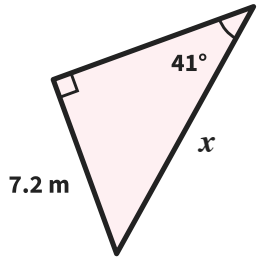
_____

Answer _____

Trigonometry: sides and angles mixed *further practice*

9

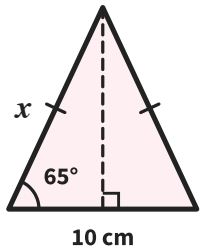
Find x to 2 decimal places.



$x =$ _____

10

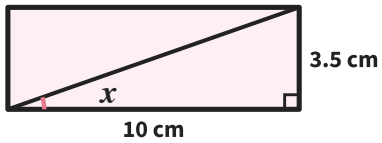
The triangle is isosceles.
Find the length x to 2 decimal places.



$x =$ _____

11

Find the angle x between the diagonal and the longer side of the rectangle, to 2 decimal places.



$x =$ _____

12

A hot air balloon is held down by one straight rope, 60 m long, tied to the ground. The rope makes an angle of 70° with the ground. How high is the balloon end of the rope?
Give your answer to 2 decimal places.

Answer _____

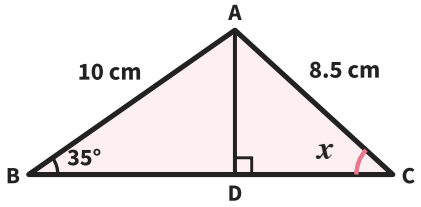
13

A phone 15 cm long leans back on a stand. Its bottom edge is on the desk and its top edge is 12 cm above the desk. The phone is easiest to read at an angle between 50° and 60° to the desk. Is it? Show how you know.

Answer _____

14

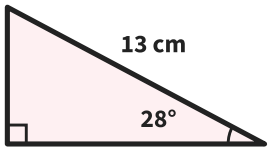
Find AD, then find the angle x to 2 decimal places.



$x =$ _____

15

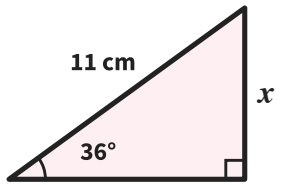
Find the perimeter of the triangle, to 2 decimal places.



Perimeter _____

16

Tom works out
$x = 11 \div \sin 36° =$ **18.71 cm.**
Without a calculator, explain how you know Tom is wrong. Then find x to 2 decimal places.



$x =$ _____