Use inverse functions to find an angle

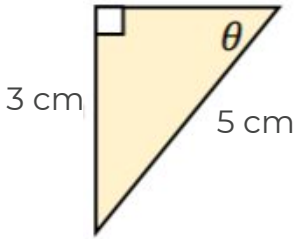
Maths

Mrs Dennett

Use inverse functions to find an angle

1. Fill in the blanks. Give final answers to one decimal place.

a)

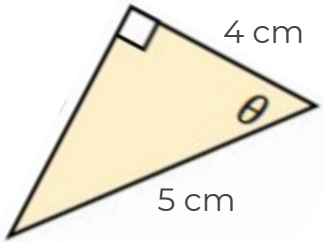


$\sin\theta = \frac{\square}{\square}$

$\theta = \sin^{-1}\frac{\square}{\square}$

$\theta = \square$

b)

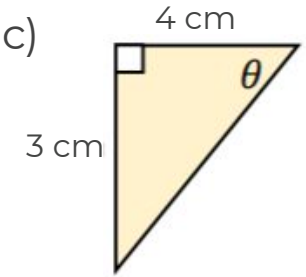


$\cos\theta = \frac{\square}{\square}$

$\theta = \cos^{-1}\frac{\square}{\square}$

$\theta = \square$

c)



$\tan\theta = \frac{\square}{\square}$

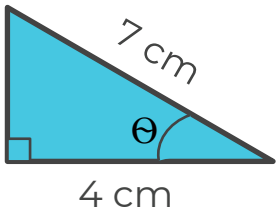
$\theta = \tan^{-1}\frac{\square}{\square}$

$\theta = \square$

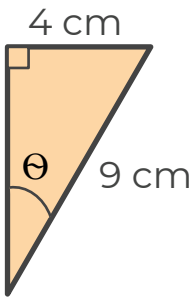
Use inverse functions to find an angle

2. Calculate the size of the labelled angles to one decimal place.

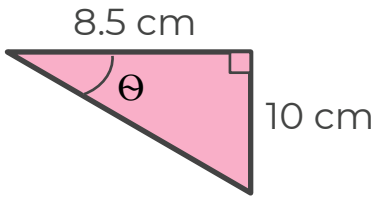
a)



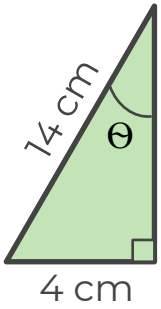
b)



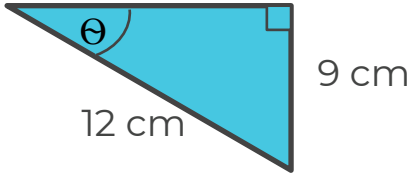
c)



d)



3. Here is Jordan's method to find the missing angle, Θ.
Explain the mistake that he has made and correct his answer.



$$\cos\theta = \frac{9}{12}$$

$$\theta = \cos^{-1}\frac{9}{12}$$

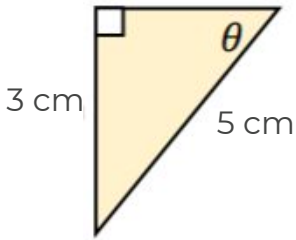
$$\theta = 41.4°$$

Answers

Use inverse functions to find an angle

1. Fill in the blanks. Give final answers to one decimal place.

a)

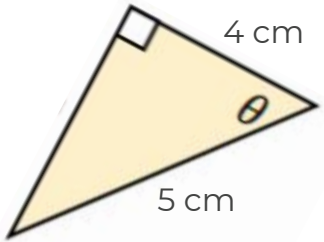


$$\sin\theta = \frac{3}{5}$$

$$\theta = \sin^{-1}\frac{3}{5}$$

$$\theta = 36.9°$$

b)

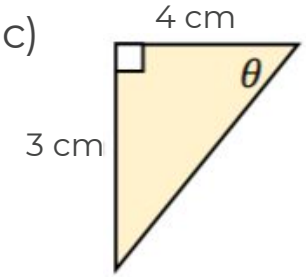


$$\cos\theta = \frac{4}{5}$$

$$\theta = \cos^{-1}\frac{4}{5}$$

$$\theta = 36.9°$$

c)



$$\tan\theta = \frac{3}{4}$$

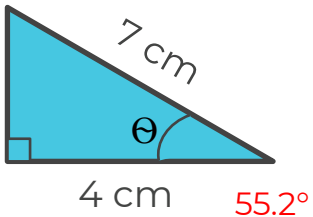
$$\theta = \tan^{-1}\frac{3}{4}$$

$$\theta = 36.9°$$

Use inverse functions to find an angle

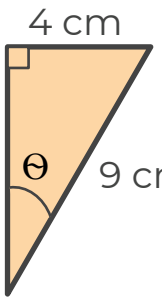
2. Calculate the size of the labelled angles to one decimal place.

a)



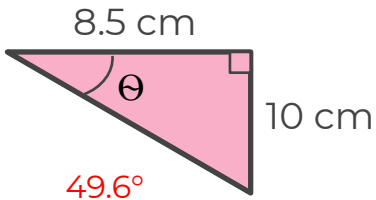
55.2°

b)



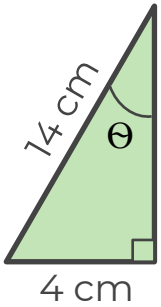
26.4°

c)



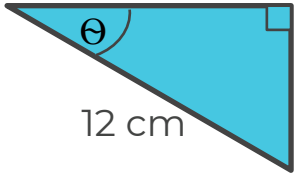
49.6°

d)



16.6°

3. Here is Jordan's method to find the missing angle, Θ.
Explain the mistake that he has made and correct his answer.



$$\cos\theta = \frac{9}{12}$$

$$\theta = \cos^{-1}\frac{9}{12}$$

$$\theta = 41.4°$$

He used cos rather than sin.

$\theta = 48.6°$