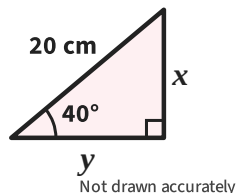


1 Trigonometry: finding a side

- a) Which side is opposite the 40° angle, x or y ?
 b) $x = 20 \times \sin 40^\circ$. Work out x to 2 decimal places.

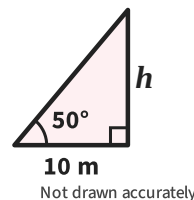


a) x
 b) $x = 20 \times \sin 40^\circ = 12.86 \text{ cm}$

2 Trigonometry: finding a side

Jo stands 10 m from a tower.
 The angle up to the top of the tower is 50° .

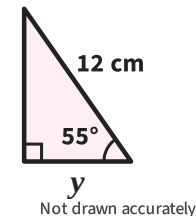
- a) Which do you use: sin, cos or tan?
 b) Find the height h to 2 decimal places.



a) $\tan (O \text{ and } A)$
 b) $h = 10 \times \tan 50^\circ = 11.92 \text{ m}$

3 Trigonometry: finding a side

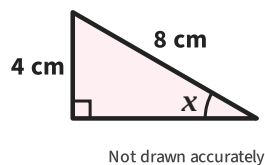
- a) Use cos to find y .
 Give your answer to 2 decimal places.
 b) Should y be shorter or longer than 12 cm? Give a reason.



a) $y = 12 \times \cos 55^\circ = 6.88 \text{ cm}$
 b) shorter: 12 cm is the hypotenuse

4 Trigonometry: finding an angle

- a) Write $\sin x$ as a fraction.
 b) Find the angle x .



a) $\sin x = \frac{4}{8}$
 b) $x = \sin^{-1}(4 \div 8) = 30^\circ$

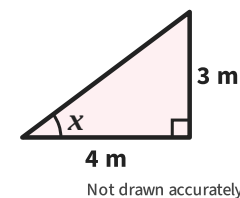
Trigonometry revision mat answers

Foundation B

5 Trigonometry: finding an angle

The diagram shows half of a roof.

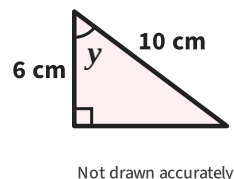
- a) Find the angle x to 1 decimal place.
 b) Tiles need a roof that slopes at 30° or more. Can this roof have tiles?



a) $x = \tan^{-1}(3 \div 4) = 36.9^\circ$
 b) Yes, 36.9° is more than 30°

6 Trigonometry: finding an angle

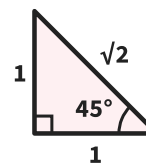
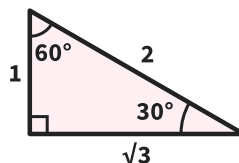
- a) Which do you use: sin, cos or tan?
 b) Find the angle y to 1 decimal place.



a) $\cos (A \text{ and } H)$
 b) $y = \cos^{-1}(6 \div 10) = 53.1^\circ$

7 Exact trigonometric values

- a) Use the first triangle to write $\sin 30^\circ$ as a fraction.
 b) Use the second triangle to write down $\tan 45^\circ$.

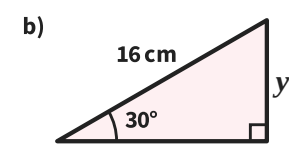
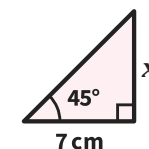


a) $\sin 30^\circ = 1 \div 2 = \frac{1}{2}$
 b) $\tan 45^\circ = 1 \div 1 = 1$

8 Exact trigonometric values

$\tan 45^\circ = 1$ and $\sin 30^\circ = \frac{1}{2}$. Do not use a calculator.

- a) Find the length x .
 b) Find the length y .



a) $x = 7 \times \tan 45^\circ = 7 \times 1 = 7 \text{ cm}$
 b) $y = 16 \times \sin 30^\circ = 16 \times \frac{1}{2} = 8 \text{ cm}$