

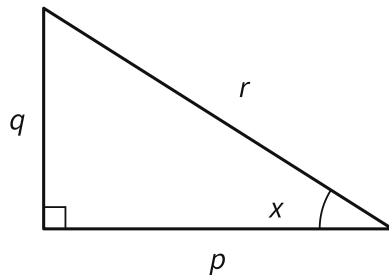
Trigonometry

ANSWERS

Calculator | 30 minutes | Total marks: 24

Name Class

- 1 Here is a right angled triangle.



Not drawn accurately

Which side is the hypotenuse?

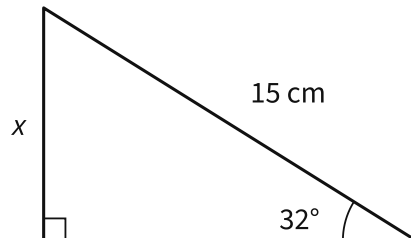
Answer r (1) [1 mark]

Which side is opposite angle x?

Answer q (1) [1 mark]

- 2 Work out the length of x.

Give your answer to 2 decimal places.



Not drawn accurately

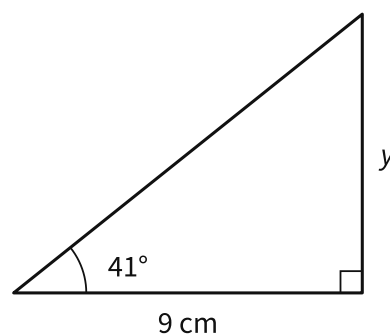
$$\sin 32^\circ = \frac{x}{15} \quad (1)$$

$$x = 15 \times \sin 32^\circ \quad (1)$$

x = 7.95 (1) cm [3 marks]

- 3 Work out the length of y.

Give your answer to 2 decimal places.



Not drawn accurately

$$\tan 41^\circ = \frac{y}{9} \quad (1)$$

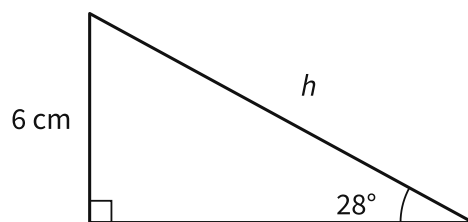
$$y = 9 \times \tan 41^\circ \quad (1)$$

y = 7.82 (1) cm [3 marks]

4

Work out the length of h .

Give your answer to 2 decimal places.



Not drawn accurately

$$\sin 28^\circ = \frac{6}{h} \quad (1)$$

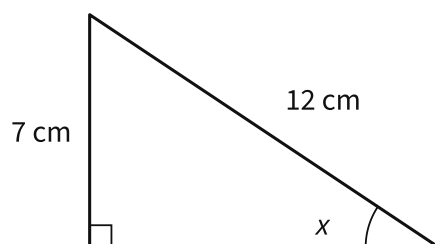
$$h = \frac{6}{\sin 28^\circ} \quad (1)$$

$$h = \underline{12.78} \quad (1) \quad [3 \text{ marks}]$$

5

Work out the size of angle x .

Give your answer to 1 decimal place.



Not drawn accurately

$$\sin x = \frac{7}{12} \quad (1)$$

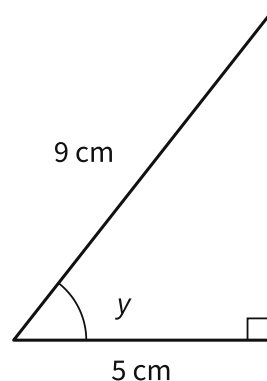
$$x = \sin^{-1}(7 \div 12) \quad (1)$$

$$x = \underline{35.7} \quad (1)^\circ \quad [3 \text{ marks}]$$

6

Work out the size of angle y .

Give your answer to 1 decimal place.



Not drawn accurately

$$\cos y = \frac{5}{9} \quad (1)$$

$$y = \cos^{-1}(5 \div 9) \quad (1)$$

$$y = \underline{56.3} \quad (1)^\circ \quad [3 \text{ marks}]$$

7

Write down the exact value of

(a) $\sin 30^\circ$

Answer $\frac{1}{2}$ (1) [1 mark]

(b) $\cos 60^\circ$

Answer $\frac{1}{2}$ (1) [1 mark]

(c) $\tan 45^\circ$

Answer 1 (1) [1 mark]

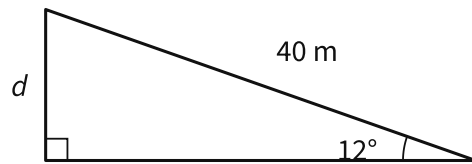
(d) $\sin 90^\circ$

Answer 1 (1) [1 mark]

8

A zip wire is 40 m long.

It makes an angle of 12° with the horizontal.



Not drawn accurately

Work out the vertical drop, d , of the zip wire.

Give your answer to 2 decimal places.

$$\sin 12^\circ = \frac{d}{40} \quad (1)$$

$$d = 40 \times \sin 12^\circ \quad (1)$$

$$d = \underline{8.32} \quad (1) \text{ m} \quad [3 \text{ marks}]$$

Question	Topic	RAG
1	I can label the sides of a right angled triangle	
2	I can use sine to find a side	
3	I can use tangent to find a side	
4	I can find a side when the unknown is the denominator	
5	I can use sine to find an angle	
6	I can use cosine to find an angle	
7	I know the exact trigonometric values	
8	I can solve a problem using trigonometry	