

Exact Trig Values

For Pearson Edexcel GCSE Mathematics (1MA1) • Foundation tier

Name _____

Total marks: **21**

Answer **all** questions in the spaces provided. Show your working: marks are given for correct method.
Do **not** use a calculator.

1 Write down the exact value of

(a) $\cos 30^\circ$

.....
(1)

(b) $\tan 30^\circ$

.....
(1)

(c) $\sin 90^\circ$

.....
(1)

(d) $\tan 45^\circ$

.....
(1)

(Total for Question 1 is 4 marks)

2 Complete the table of exact values.

	0°	30°	45°	60°	90°
sin		$\frac{1}{2}$			1
cos	1		$\frac{\sqrt{2}}{2}$		
tan				$\sqrt{3}$	undefined

(3)

(Total for Question 2 is 3 marks)

3 ABC is a right-angled triangle.
 $AC = 18$ cm and angle $BAC = 30^\circ$

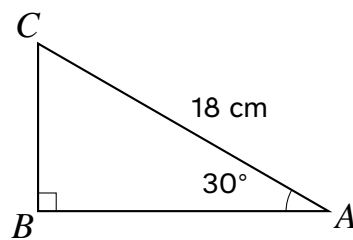


Diagram **NOT** accurately drawn

Work out the length of BC .

..... cm

(2)

(Total for Question 3 is 2 marks)

- 4 Here is a right-angled triangle.

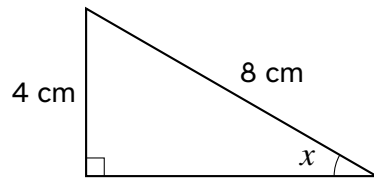


Diagram **NOT** accurately drawn

Work out the size of angle x .

$$x = \dots\dots\dots^\circ$$

(2)

(Total for Question 4 is 2 marks)

- 5 PQR is a right-angled triangle.

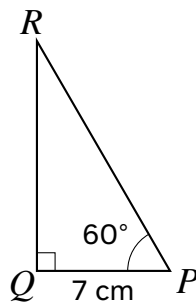


Diagram **NOT** accurately drawn

Work out the length of PR .

$$\dots\dots\dots \text{ cm}$$

(2)

(Total for Question 5 is 2 marks)

- 6 Here is a right-angled triangle.

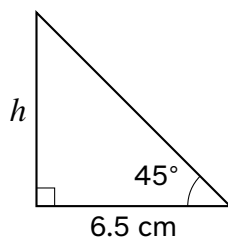


Diagram **NOT** accurately drawn

Work out the length of h .

$$h = \dots\dots\dots \text{ cm}$$

(2)

(Total for Question 6 is 2 marks)

- 7 A ladder of length 6 m leans against a vertical wall.
The foot of the ladder is on horizontal ground.
The ladder makes an angle of 60° with the ground.

Work out the distance from the foot of the ladder to the wall.

$$\dots\dots\dots \text{ m}$$

(2)

(Total for Question 7 is 2 marks)

8 Show that $4 \cos 60^\circ + 3 \tan 45^\circ = 5 \sin 90^\circ$

(2)

(Total for Question 8 is 2 marks)

9 Work out the value of $\sin 30^\circ + \cos 60^\circ + \tan 45^\circ$

.....

(2)

(Total for Question 9 is 2 marks)
