

Name: _____

GCSE (1 – 9)

Trigonometry Exact Values

Instructions

- Use **black** ink or ball-point pen.
- Answer all questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- You must **show all your working out.**

Information

- The marks for each question are shown in brackets – *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end

1 Write down the exact value of $\sin(45^\circ)$

$$\frac{\sqrt{2}}{2}$$

(Total for Question 1 is 1 marks)

2 Write down the exact value of $\cos(90^\circ)$

$$0$$

(Total for Question 2 is 1 marks)

3 Write down the exact value of $\tan(30^\circ)$

$$\frac{1}{\sqrt{3}} \quad \text{or} \quad \frac{\sqrt{3}}{3}$$

$$\frac{\sqrt{3}}{3}$$

(Total for Question 3 is 1 marks)

4 Write down the exact value of $\sin(30^\circ)$

$$\frac{1}{2}$$

(Total for Question 4 is 1 marks)

5 Write down the exact value of $\tan(45^\circ)$

$$1$$

(Total for Question 5 is 1 marks)

6 Write down the exact value of $\cos(0^\circ)$

$$1$$

(Total for Question 6 is 1 marks)

7 Write down the exact value of $\sin(60^\circ)$

$$\frac{\sqrt{3}}{2}$$

(Total for Question 7 is 1 marks)

	0	30	45	60	90
sin	0	1	2	3	4
cos	4	3	2	1	0

8 Write down the exact value of $\sin(0)$

0

(Total for Question 8 is 1 marks)

9 Write down the exact value of $\cos(60^\circ)$

$\frac{1}{2}$

(Total for Question 9 is 1 marks)

10 Write down the exact value of $\tan(0)$

0

(Total for Question 10 is 1 marks)

11 Write down the exact value of $\sin(90^\circ)$

1

(Total for Question 11 is 1 marks)

12 Write down the exact value of $\cos(45^\circ)$

$\frac{\sqrt{2}}{2}$

(Total for Question 12 is 1 marks)

13 Write down the exact value of $\tan(60^\circ)$

$\sqrt{3}$

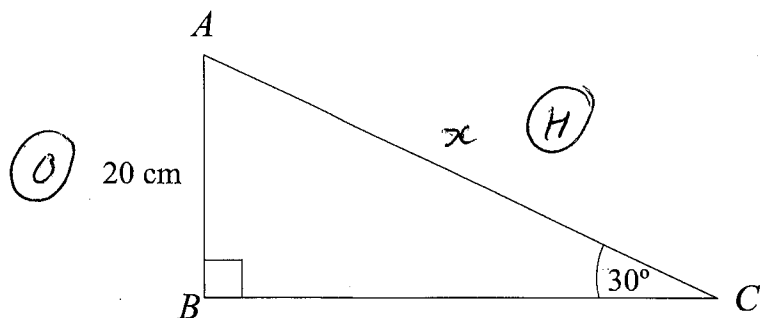
(Total for Question 13 is 1 marks)

14 Write down the exact value of $\cos(30^\circ)$

$\frac{\sqrt{3}}{2}$

(Total for Question 14 is 1 marks)

15



Calculate the length AC .

$$\sin \theta = \frac{O}{H}$$

$$\sin 30 = \frac{20}{x}$$

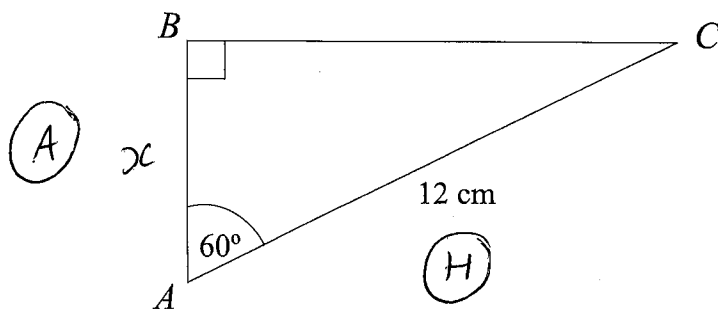
$$\frac{1}{2} = \frac{20}{x}$$

$$x = 40 \text{ cm}$$

.....40.....cm

(Total for Question 15 is 3 marks)

16



Calculate the length AB .

$$\cos \theta = \frac{A}{H}$$

$$\cos(60) = \frac{x}{12}$$

$$\frac{1}{2} = \frac{x}{12}$$

$$x = 6 \text{ cm}$$

.....6.....cm

(Total for Question 16 is 3 marks)