THIRD SPACE LEARNING

GCSE Exam Questions

Exact Trig Values | Geometry & Measure

GCSE Exam Questions: Exact Trig Values

1) What is the exact value of tan(30)? Circle your answer.

$\frac{\sqrt{2}}{2}$ $\frac{1}{2}$ $\frac{\sqrt{3}}{3}$ $\sqrt{3}$

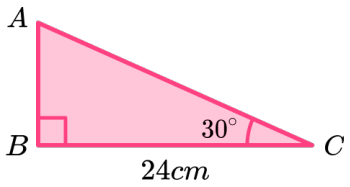
(1 mark)

2) Calculate the exact value of sin(60) + tan(60).

Simplify your answer by writing it as a single term

(2 marks)

3) Use trigonometry to show that AB is $8\sqrt{3}$ .Diagram NOT to scale.



(2 marks)

4) The diagram shows a right-angled triangle.

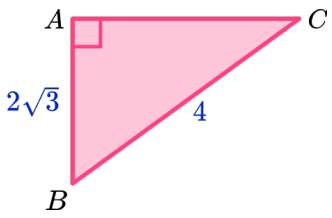
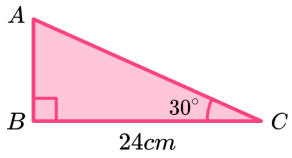
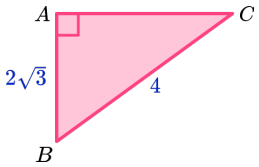
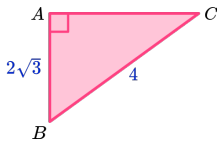


Diagram is NOT to scale

Use trigonometry to show that angle ABC is 30°.

(2 marks)

GCSE Exam Questions: Topic Answers

	Question	Answer	Marks
1)	What is the exact value of tan(30)? Circle your answer in full $\frac{\sqrt{2}}{2}$ $\frac{1}{2}$ $\frac{\sqrt{3}}{3}$ $\sqrt{3}$	$\frac{\sqrt{3}}{3}$	**(1)**
2)	Calculate the exact value of sin(60) + tan(60). Simplify your answer by writing it as a single term.	$\frac{\sqrt{3}}{2} + \sqrt{3}$ $= \frac{3\sqrt{3}}{2}$	**(1)** **(1)**
3)	Use trigonometry to show that AB is $8\sqrt{3}\,cm$  Diagram NOT to scale	$tan(\theta) = \frac{Opposite}{Adjacent}$ $tan(30) = \frac{\sqrt{3}}{3}$ $AB = 24 \times \frac{\sqrt{3}}{3} = 8\sqrt{3}$	 **(1)** **(1)**
3)	The diagram shows a right-angled triangle  Diagram NOT to scale Use trigonometry to show that ABC is 30°	 $cos(\theta) = \frac{Adjacent}{Hypotenuse}$ $cos(ABC) = \frac{2\sqrt{3}}{4} = \frac{\sqrt{3}}{2}$ $cos(30) = \frac{\sqrt{3}}{2}$ So ABC is 30°	 **(1)** **(1)**

Where to go next?

For more diagnostic questions, and GCSE maths revision resources and worksheets to support students in fixing any misconceptions take a look at the free Third Space Learning GCSE maths revision pages.

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