

GCSE Mathematics

H

Exact Trig Values

Higher Tier | Grades 7-8

Total Marks	Time	Questions
44	44 min	20

Instructions:

- Do not use a calculator when you see: 
- Answer all questions in the spaces provided.
- Show all your working - marks are awarded for method as well as final answers.
- Cross through any work you do not want to be marked.
- Check your answers if you have time at the end.

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Edexcel-style questions**Q1** 

Grade 7

Edexcel style

Write down the exact value of $\cos 60^\circ$.

Answer _____

teachably

[1 mark]**Q2** 

Grade 7

Edexcel style

Work out the exact value of $\sin 30^\circ + \cos 60^\circ$.

Answer _____

teachably

[2 marks]

Q3

Grade 8

Edexcel style

The diagram shows a right-angled triangle. Find the exact length of side x . Give your answer as a surd in its simplest form.

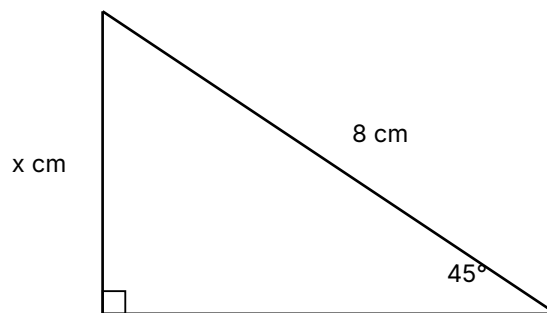


Diagram NOT accurately drawn

Answer _____

teachably

[3 marks]**Q4**

Grade 8

Edexcel style

Given that $0^\circ \leq x \leq 90^\circ$ and $\sin x = \frac{\sqrt{3}}{2}$, find the value of x .

Answer _____

teachably

[2 marks]

Q5

Grade 8

Edexcel style

Work out the exact value of $2 \sin 60^\circ - \tan 45^\circ$. Give your answer as a surd in its simplest form.

Answer

teachably

[3 marks]

AQA-style questions**Q6** 

Grade 7

AQA style

Write down the exact value of $\sin 45^\circ$.

Answer

teachably

[1 mark]**Q7** 

Grade 7

AQA style

Work out the exact value of $\cos 30^\circ \times \tan 60^\circ$.

Answer

teachably

[2 marks]

Q8

Grade 8

AQA style

The diagram shows a right-angled triangle. Find the exact length of side x . Give your answer as a surd in its simplest form.

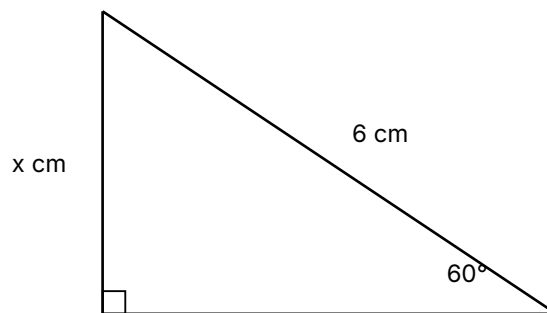


Diagram NOT accurately drawn

Answer _____

teachably

[3 marks]

Q9

Grade 8

AQA style

Given that $0^\circ \leq x \leq 90^\circ$ and $\cos x = \frac{\sqrt{2}}{2}$, find the value of x .

Answer _____

teachably

[2 marks]

Q10

Grade 8

AQA style

Work out the exact value of $4 \cos 30^\circ + \sin 90^\circ$. Give your answer as a surd in its simplest form.

Answer

teachably

[3 marks]

OCR-style questions**Q11** 

Grade 7

OCR style

Write down the exact value of $\tan 60^\circ$.

Answer _____

teachably

[1 mark]**Q12** 

Grade 7

OCR style

Work out the exact value of $\sin 60^\circ \times \cos 30^\circ$.

Answer _____

teachably

[2 marks]

Q13

Grade 8

OCR style

The diagram shows a right-angled triangle. Find the exact length of side x . Give your answer as a surd in its simplest form.

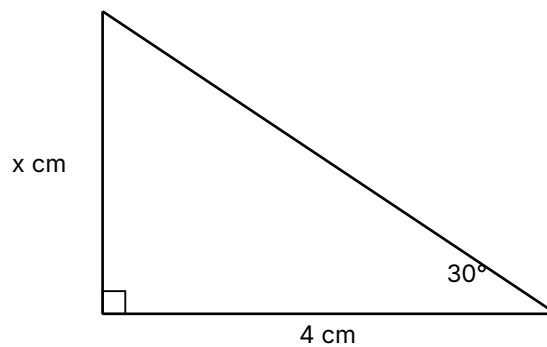


Diagram NOT accurately drawn

Answer _____

teachably

[3 marks]**Q14**

Grade 8

OCR style

Given that $0^\circ \leq x \leq 90^\circ$ and $\tan x = \sqrt{3}$, find the value of x .

Answer _____

teachably

[2 marks]

Q15

Grade 8

OCR style

Work out the exact value of $(\sin 45^\circ)^2 + (\cos 45^\circ)^2$. Give your answer in its simplest form.

Answer

teachably

[3 marks]

Teachably-style questions**Q16** 

Grade 7

Teachably style

Write down the exact value of $\sin 60^\circ$.

Answer

teachably

[1 mark]**Q17** 

Grade 7

Teachably style

Work out the exact value of $\tan 45^\circ + \sin 90^\circ$.

Answer

teachably

[2 marks]

Q18

Grade 8

Teachably style

The diagram shows a right-angled triangle. Find the exact length of side x . Give your answer as a surd in its simplest form.

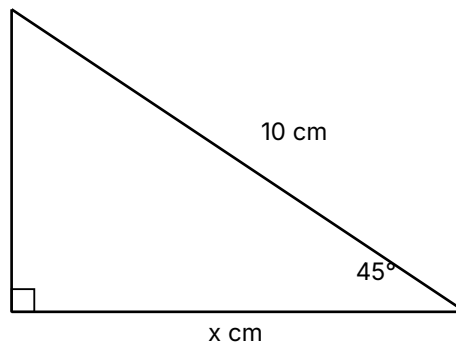


Diagram NOT accurately drawn

Answer _____

teachably

[3 marks]**Q19**

Grade 8

Teachably style

Given that $0^\circ \leq x \leq 90^\circ$ and $\sin x = \frac{1}{2}$, find the value of x .

Answer _____

teachably

[2 marks]

Q20 

Grade 8

Teachably style

Work out the exact value of $3 \tan 60^\circ - 2 \tan 30^\circ$. Give your answer as a surd in its simplest form.

Answer

teachably

[3 marks]**END OF PAPER****Want help from an expert maths tutor?**

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