JP Maths Revision

Attempt the paper before watching the solutions!

https://www.youtube.com/@JPMathsRevision

HIGHER TIER

3D Pythagoras and Trigonometry

INSTRUCTIONS

- Use **black ink** or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- You must **show all your working.**
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.

INFORMATION

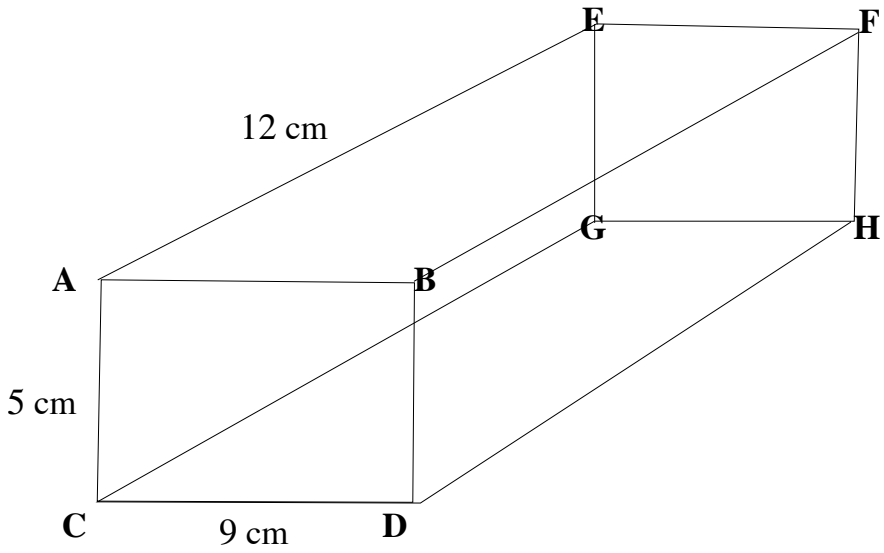
- The marks for **each** question are shown in brackets– *use this as a guide as to how much time to spend on each question.*

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.

You've got this!

1. ABCDEFGH is a cuboid



AC = 5 cm

CD = 9 cm

AE = 12 cm

Find the length of the diagonal CF

cm

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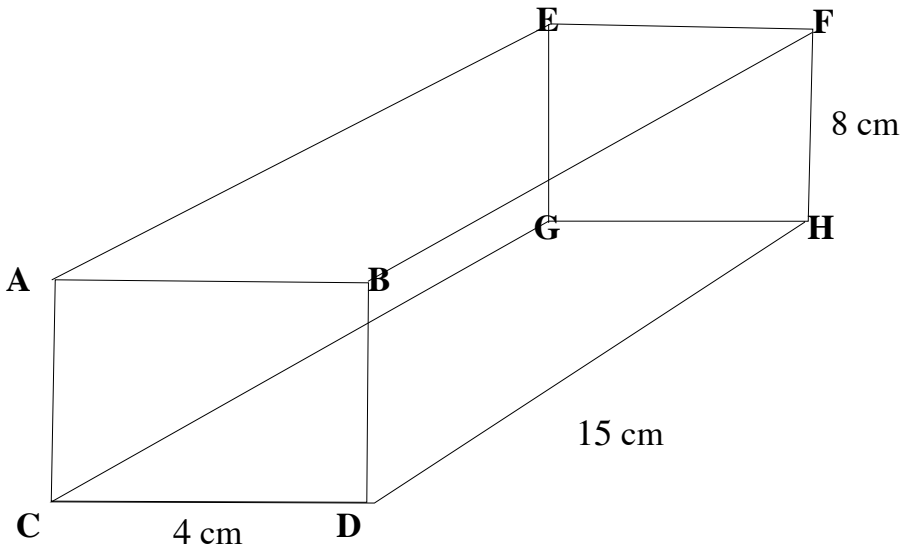
(Total for Question 1 is 3 marks)

2. ABCDEFGH is a cuboid



CD = 4 cm

DH = 15 cm

FH = 8 cm

Find the angle between the diagonal CF and the base CDHG.

°

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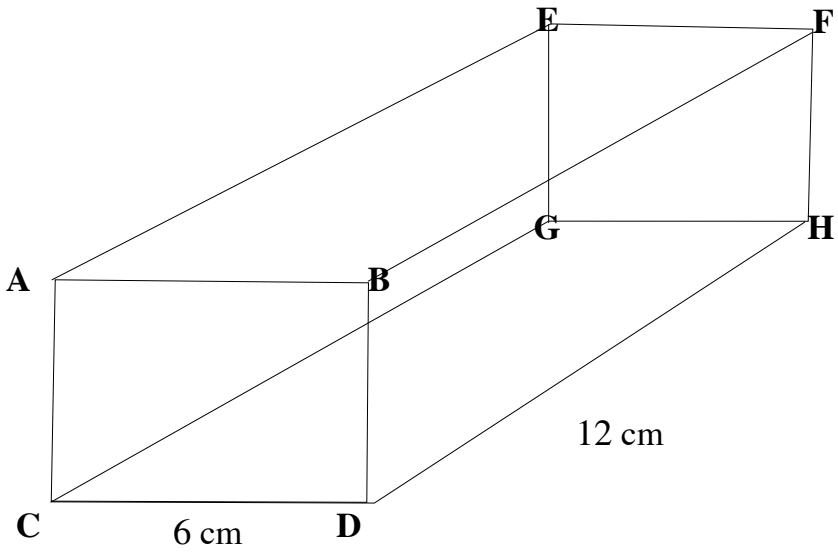
(Total for Question 2 is 4 marks)

3. ABCDEFGH is a cuboid



CD = 6 cm

DH = 12 cm

The angle between the diagonal CF and the base CDHG is 38°.

Find the height of the cuboid.

cm

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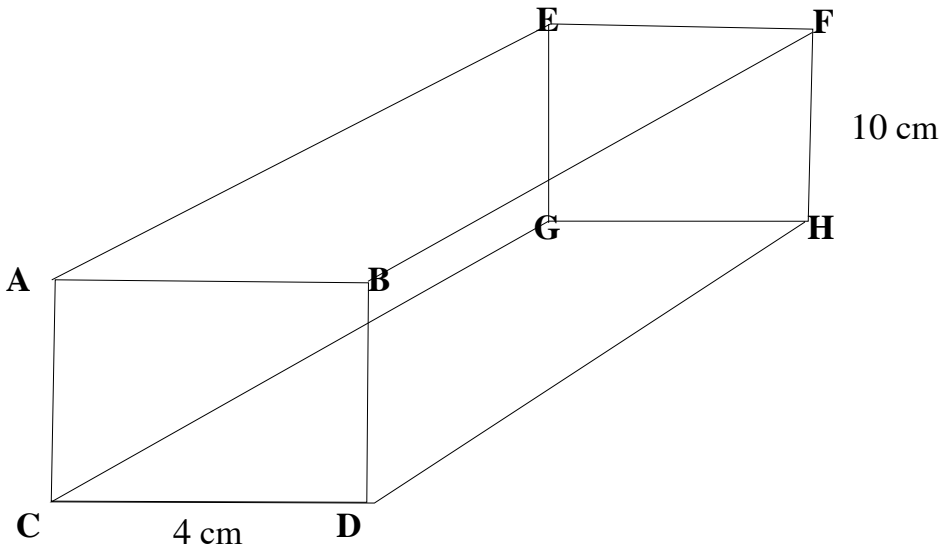
(Total for Question 3 is 4 marks)

4. ABCDEFGH is a cuboid



CD = 4 cm

FH = 10 cm

Angle DGH = 25°

Find the angle between CF and the plane CDHG.

°

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(Total for Question 4 is 4 marks)