



ACHIEVE ACADEMY

GCSE Maths — Foundation Tier

Volume & Surface Area · Practice Booklet

NAME: _____

CLASS: _____

DATE: _____

☐ Developing

☒ Secure

☐ Greater Depth

Answer every question in the working space provided. Method marks are available for correct working even if the final answer is wrong. Check the time allowed with your tutor before you start.

Volume & Surface Area

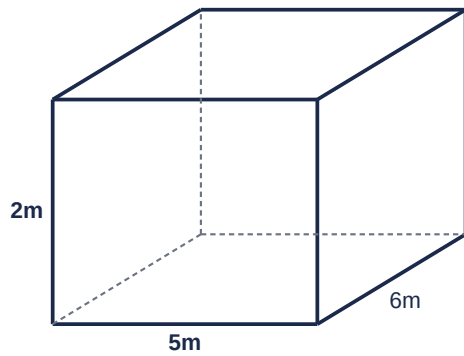
Total marks available: 90

● Volume & Surface Area

Q1

[3 marks]

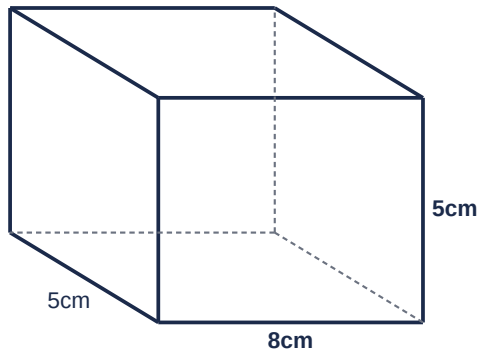
The cuboid below has length 5m, width 6m and height 2m. Calculate its total surface area.



Q2

[3 marks]

The cuboid below has length 8cm, width 5cm and height 5cm. Calculate its total surface area.

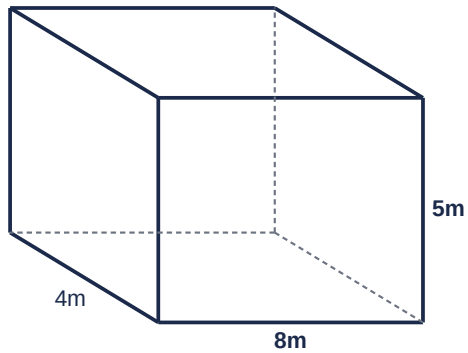


A large dashed rectangular box for the student to show their working.

Q3

[3 marks]

The cuboid below has length 8m, width 4m and height 5m. Calculate its total surface area.

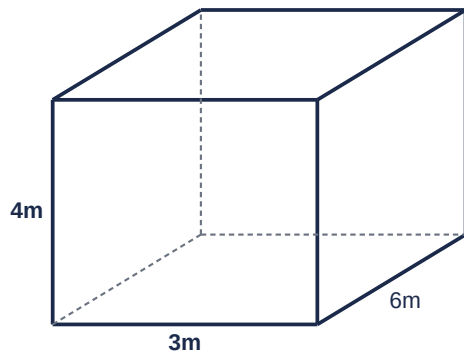


A large dashed rectangular box for the student to show their work.

Q4

[3 marks]

The cuboid below has length 3m, width 6m and height 4m. Calculate its total surface area.

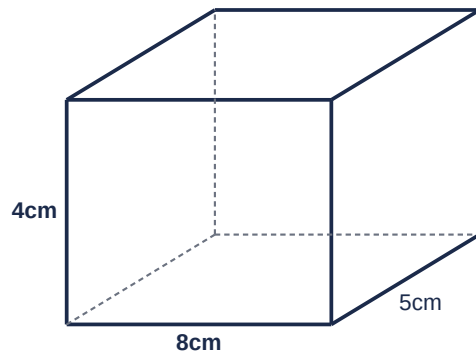


A large dashed rectangular box for writing the answer.

Q5

[2 marks]

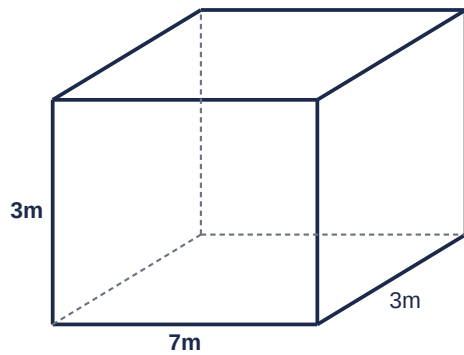
The cuboid below has length 8cm, width 5cm and height 4cm. Calculate its volume.



Q6

[3 marks]

The cuboid below has length 7m, width 3m and height 3m. Calculate its total surface area.

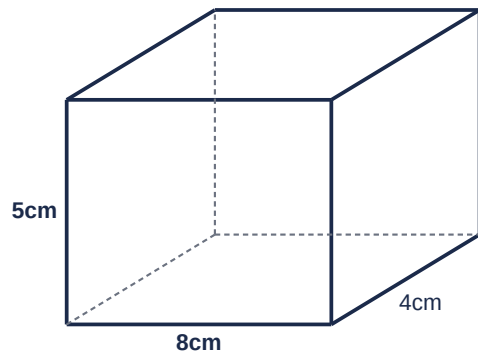


A large dashed rectangular box for writing the answer.

Q7

[2 marks]

The cuboid below has length 8cm, width 4cm and height 5cm. Calculate its volume.

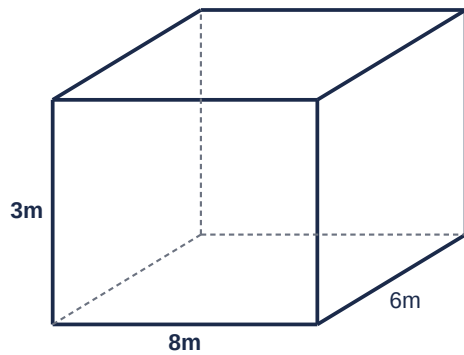


A large dashed rectangular box for writing the answer.

Q8

[3 marks]

The cuboid below has length 8m, width 6m and height 3m. Calculate its total surface area.

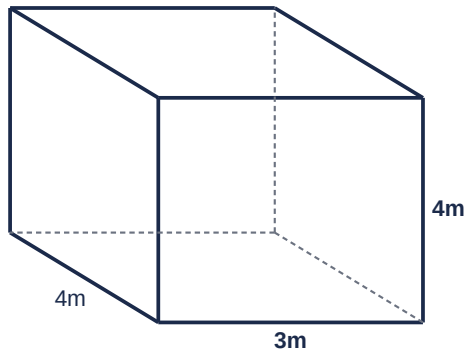


A large dashed rectangular box for writing the answer.

Q9

[2 marks]

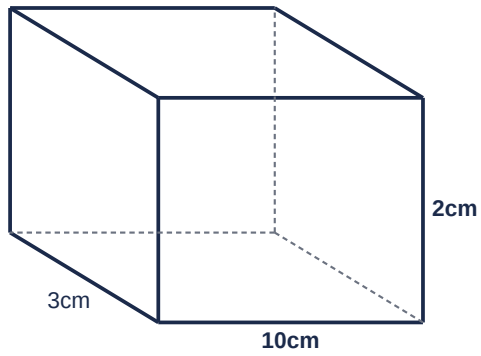
The cuboid below has length 3m, width 4m and height 4m. Calculate its volume.



Q10

[2 marks]

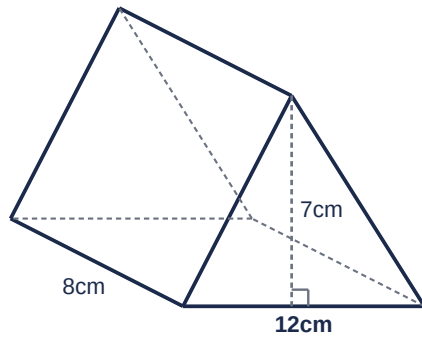
The cuboid below has length 10cm, width 3cm and height 2cm. Calculate its volume.



Q11

[3 marks]

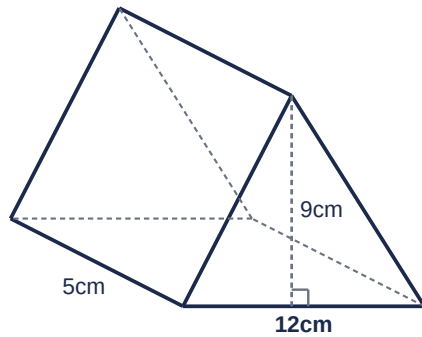
The triangular prism below has a triangular cross-section with base 12cm and height 7cm, and the prism is 8cm long. Calculate its volume.



Q12

[3 marks]

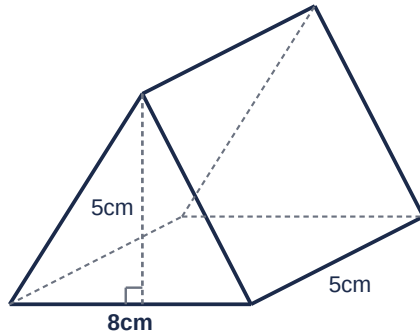
The triangular prism below has a triangular cross-section with base 12cm and height 9cm, and the prism is 5cm long. Calculate its volume.



Q13

[3 marks]

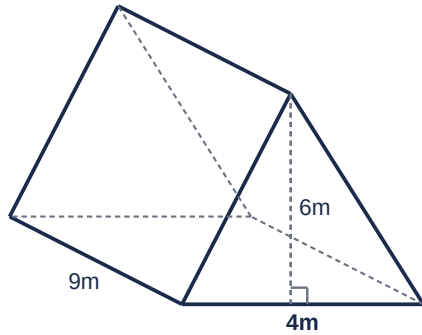
The triangular prism below has a triangular cross-section with base 8cm and height 5cm, and the prism is 5cm long. Calculate its volume.



Q14

[3 marks]

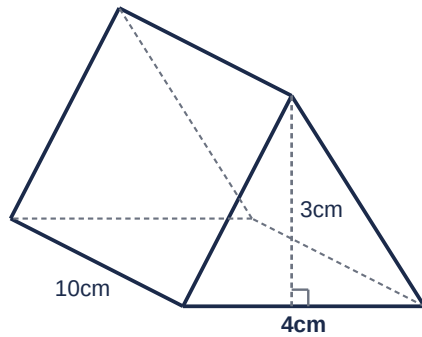
The triangular prism below has a triangular cross-section with base 4m and height 6m, and the prism is 9m long. Calculate its volume.



Q15

[3 marks]

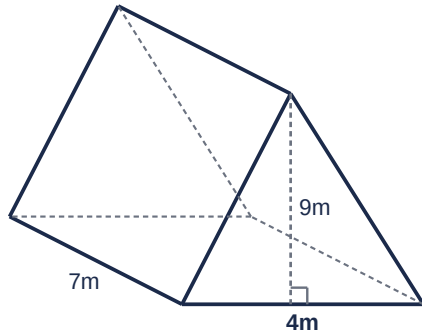
The triangular prism below has a triangular cross-section with base 4cm and height 3cm, and the prism is 10cm long. Calculate its volume.



Q16

[3 marks]

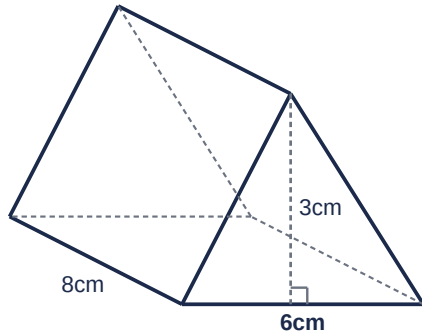
The triangular prism below has a triangular cross-section with base 4m and height 9m, and the prism is 7m long. Calculate its volume.



Q17

[3 marks]

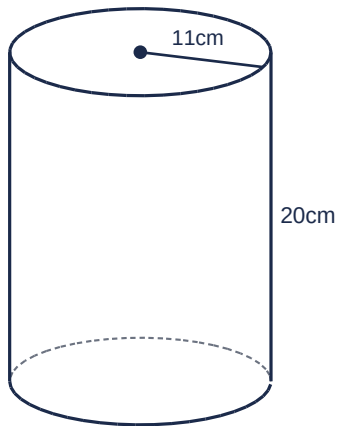
The triangular prism below has a triangular cross-section with base 6cm and height 3cm, and the prism is 8cm long. Calculate its volume.



Q18

[3 marks]

The cylinder below has radius 11cm and height 20cm. Calculate its volume, to 1 decimal place.

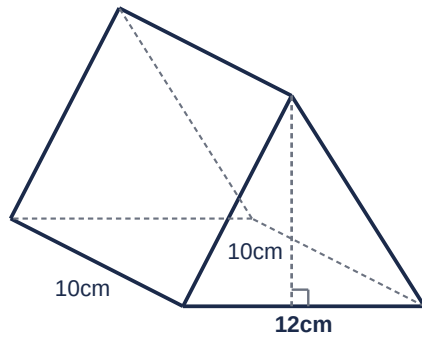


A large rectangular area with a dashed border, intended for the student to show their working and provide the final answer.

Q19

[3 marks]

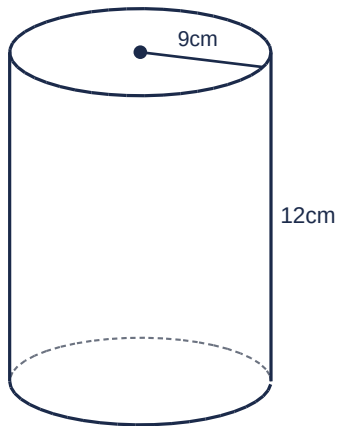
The triangular prism below has a triangular cross-section with base 12cm and height 10cm, and the prism is 10cm long. Calculate its volume.



Q20

[3 marks]

The cylinder below has radius 9cm and height 12cm. Calculate its volume, to 1 decimal place.

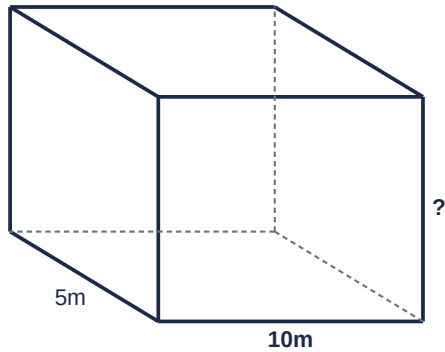


A large rectangular area with a dashed border, intended for the student to show their working out.

Q21

[3 marks]

A cuboid has a volume of 500m^3 , a length of 10m and a width of 5m . Calculate its height, marked with a question mark.

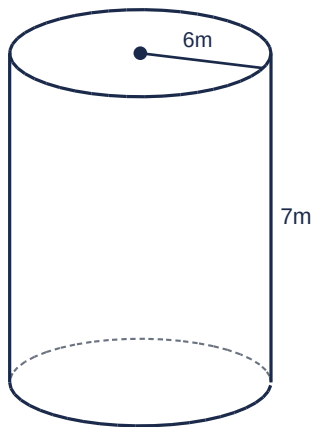


A large dashed rectangular box for the student to show their working.

Q22

[4 marks]

The cylinder below has radius 6m and height 7m. Calculate its total surface area, to 1 decimal place.

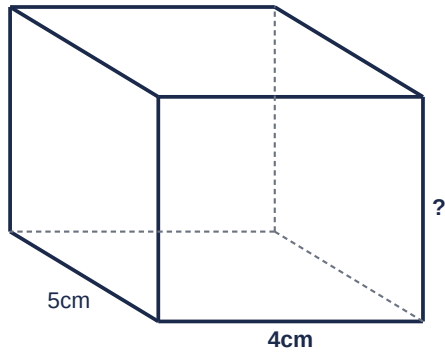


A large rectangular area with a dashed border, intended for the student to show their working out.

Q23

[3 marks]

A cuboid has a volume of 140cm^3 , a length of 4cm and a width of 5cm . Calculate its height, marked with a question mark.

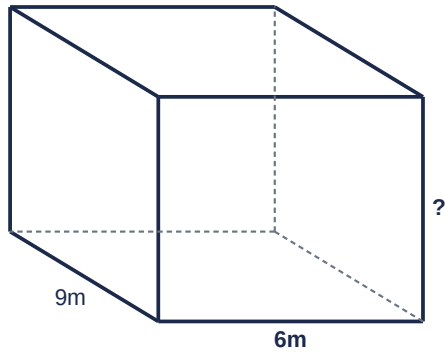


A large dashed rectangular box for the student to show their working.

Q24

[3 marks]

A cuboid has a volume of 324m^3 , a length of 6m and a width of 9m . Calculate its height, marked with a question mark.

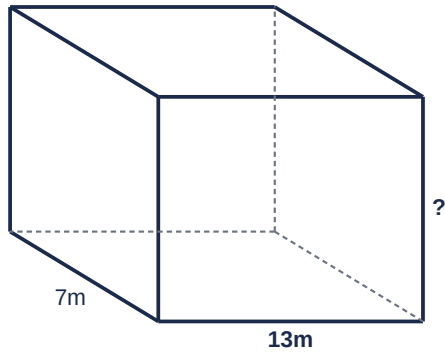


A large dashed rectangular box for the student to show their working.

Q25

[3 marks]

A cuboid has a volume of 637m^3 , a length of 13m and a width of 7m . Calculate its height, marked with a question mark.

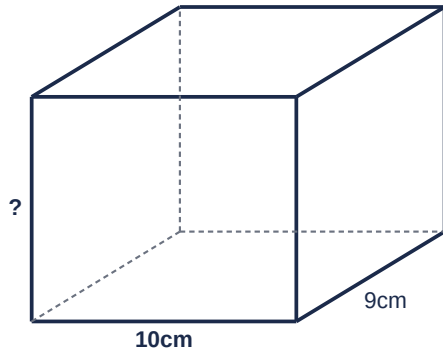


A large dashed rectangular box for the student to show their working.

Q26

[3 marks]

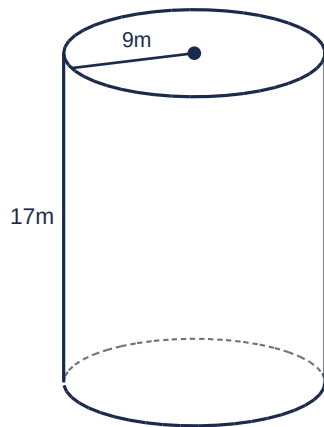
A cuboid has a volume of 810cm^3 , a length of 10cm and a width of 9cm . Calculate its height, marked with a question mark.



Q27

[4 marks]

The cylinder below has radius 9m and height 17m. Calculate its total surface area, to 1 decimal place.

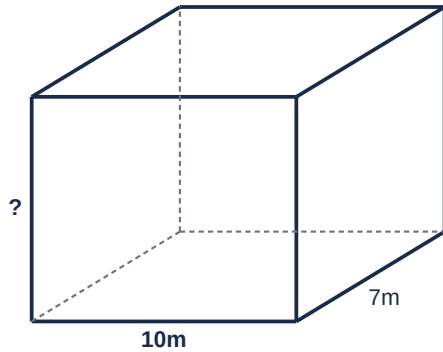


A large rectangular area with a dashed border, intended for the student to show their working out.

Q28

[3 marks]

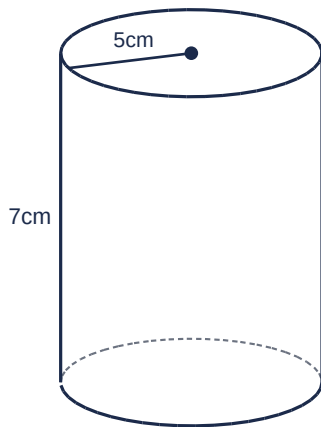
A cuboid has a volume of 630m^3 , a length of 10m and a width of 7m . Calculate its height, marked with a question mark.



Q29

[4 marks]

The cylinder below has radius 5cm and height 7cm. Calculate its total surface area, to 1 decimal place.

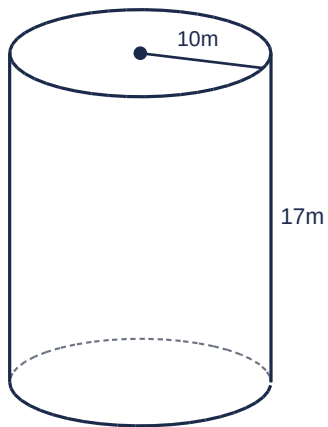


A large rectangular area with a dashed border, intended for the student to show their working out.

Q30

[4 marks]

The cylinder below has radius 10m and height 17m. Calculate its total surface area, to 1 decimal place.



A large rectangular area with a dashed border, intended for the student to show their working out.