VOLUME OF PRISM

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers
Nil

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.
Calculators may be used.

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.
Questions labelled with an asterisk (*) are ones where the quality of your written communication will be assessed – you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.

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. Here is a cuboid.

Work out the volume of the cuboid.

*2.* The diagram shows two fish tanks, each in the shape of a cuboid.

Finley fills both fish tanks with water.

Which fish tank holds the most water?
You must show all your calculations.
The diagram shows a prism.

Work out the volume of the prism.

\[
\text{.................................}\text{cm}^3
\]

(4 marks)
4. Here is a solid prism.

Work out the volume of the prism.

\[ \text{Volume} = \text{base area} \times \text{height} \]

\[ \text{base area} = \frac{1}{2} \times (5 \text{ cm} + 4 \text{ cm}) \times 7 \text{ cm} \]

\[ = \frac{1}{2} \times 9 \text{ cm} \times 7 \text{ cm} \]

\[ = 31.5 \text{ cm}^2 \]

\[ \text{Volume} = 31.5 \text{ cm}^2 \times 11 \text{ cm} \]

\[ = 346.5 \text{ cm}^3 \]

\[ \text{Volume} = 346.5 \text{ cm}^3 \]

(4 marks)
5. Work out the volume of the triangular prism.

6. Calculate the volume of the triangular prism.
7. The diagram shows a triangular prism.

Diagram NOT accurately drawn

$BC = 4$ cm, $CF = 12$ cm and angle $ABC = 90^\circ$.

The volume of the triangular prism is $84$ cm$^3$.

Work out the length of the side $AB$ of the prism.

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(4 marks)
8. The diagram shows a triangular prism.

The cross-section of the prism is a trapezium. The lengths of the parallel sides of the trapezium are 8 cm and 6 cm. The distance between the parallel sides of the trapezium is 5 cm. The length of the prism is 20 cm.

Work out the volume of the prism.
A skip is in the shape of a prism with cross-section $ABCD$. $AD = 2.3 \text{ m}$, $DC = 1.3 \text{ m}$ and $BC = 1.7 \text{ m}$. The width of the skip is 1.5 m.

(a) Calculate the area of the shape $ABCD$.

(b) Calculate the volume of the skip.