Question 1: A map has a scale 1:250
A straight road is 2 cm long on the map. What is the length of road?
Question 2: A different map shows another straight road. The scale factor is 1:500 The road is 2000 m long. How long is the line on the map in cm ?

Question 3: This question is about a drawing of a box - Complete the table below

|  | Scale factor | Dimensions on <br> paper | Actual <br> dimensions | Linear or not? |
| :--- | :--- | :--- | :--- | :--- |
| Length of a <br> box | $1: 20$ | 3 cm | cm |  |
| Width of box | $1: 20$ | cm | 1 meter |  |

Question 4: This question is about a drawing of a house - Complete the table below

|  | Scale factor | Dimensions on <br> paper | Actual <br> dimensions | Linear or not? |
| :--- | :---: | :---: | :---: | :---: |
| Living room <br> wall | $1: 60$ | 10 cm | Meters |  |
| Kitchen <br> window | $1: 60$ | cm | 3 meters |  |

Question 5: This question is about a map - Complete the table below

|  | Scale factor | Dimensions on <br> paper | Actual <br> dimensions | Linear or not? |
| :--- | :---: | :---: | :---: | :---: |
| Town A to B | $1: 500$ | 3 cm | Km |  |
| Town C to D | $1: 500$ | cm | 4 km |  |

Question 6: This question is about a product design for a car - Complete the table below

|  | Scale factor | Dimensions on <br> paper | Actual <br> dimensions | Linear or not? |
| :--- | :--- | :---: | :---: | :--- |
| Length of car |  | 3 cm | 3 m |  |
| Width of car |  | 2 cm |  |  |

## *Extension*

2 similar cylinders $A$ an $B$ are shown


| Length of radius A | 5 cm | Length of radius B | 25 cm |
| :--- | :--- | :--- | :--- |
| Area of A |  | Area of B | $7850 \mathrm{~cm}^{2}$ |
| Volume of A | $785 \mathrm{~cm}^{3}$ | Volume of B |  |

## Question 7



1cm: 1.2km
The map shows the towns $A, B$ and $C$
Fill in the box below

| Distance | Distance | Distance <br> from A - B | A star *Extension* <br> from A - C | A star *Extension* <br> Angle BAC without <br> using a protractor |
| :---: | :---: | :---: | :---: | :---: | Area of Triangle ABC

Question 8: Fill out the boxes below being very careful to study the units

| $1: 300$ |  | $1: 150$ |  | $1: 30$ | $1: 25$ |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $4 \mathrm{~cm}=$ | km | $1 \mathrm{~m}=$ | km |  | $\mathrm{cm}=600 \mathrm{~m}$ |  |
| $1: 20$ |  | $1: 10$ |  | $1: 4$ | $\mathrm{~mm}=400 \mathrm{~m}$ |  |
| $10 \mathrm{~m}=$ | cm | $3 \mathrm{~cm}=$ | $\mathrm{m}=$ | km | $1 \mathrm{~km}=\quad \mathrm{m}$ | $6 \mathrm{~km}=\quad \mathrm{cm}$ |

