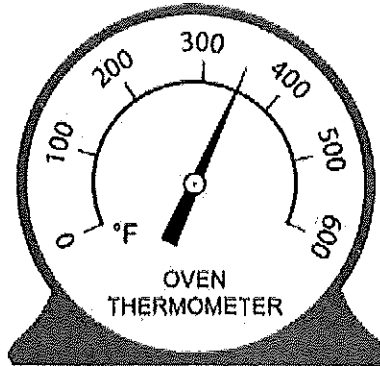


# PRECISION MEASUREMENT Q'S

**Question 1****2 marks**

State the precision and uncertainty of the oven thermometer shown below.



Precision: \_\_\_\_\_

Uncertainty: \_\_\_\_\_

**Question 2****2 marks**

A meter stick is left outside in the sun and it expands. Explain how this will affect the stick's accuracy and precision.

Accuracy:

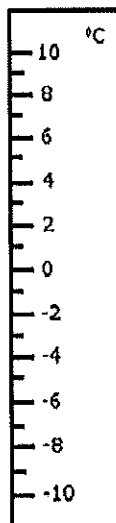
Precision:

**Question 3****1 mark**

Explain which of the following thermometers is more precise.



Thermometer A



Thermometer B

**Question 4****2 marks**

A company makes sticks for frozen fruit snacks with a measurement of  $15.5 \text{ cm} \begin{smallmatrix} +0 \\ -0.2 \text{ cm} \end{smallmatrix}$ .

(a) State the maximum length. (1 mark)

(b) State the minimum length. (1 mark)

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**Question 5****1 mark**

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A lemonade bottling company fills 500 mL bottles.

Explain why the company should be accurate when measuring the amount of lemonade it puts in each bottle.

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**Question 6****2 marks**

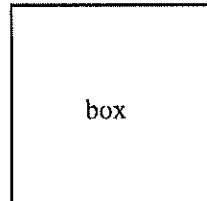
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The recommended oil capacity of an engine has a maximum volume of 52.5 mL and a minimum volume of 47.5 mL.

State the measurement in the form: *nominal value*  $\pm \frac{1}{2}$  (*tolerance*).

**Question 7****2 marks**

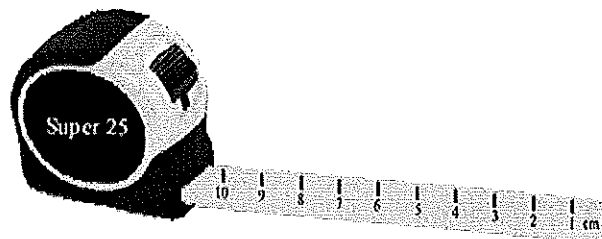
Rajiv places 4 boxes side by side. Each box is built to measure  $12'' \pm \frac{1}{32}''$  in width. Calculate the combined width of the boxes in the format: *measurement*  $\pm$  *uncertainty*.



$$12'' \pm \frac{1}{32}''$$

**Question 8****1 mark**

Mario is installing a subfloor using sheets of plywood. He measures a sheet of plywood to be 225 cm long using the tape measure shown below.



Calculate the minimum possible length of the sheet of plywood.

Do not round your final answer.

**Question 9****1 mark**

Oumar is cutting lenses for a pair of glasses. In order for the lenses to fit into the frame, the lenses need to have a minimum thickness of 1.896 mm and a maximum thickness of 2.022 mm.

State the measurement in the form:

maximum value  $\begin{matrix} +0 \\ -\text{tolerance} \end{matrix}$

Do not round your final answer.

**Question 10****2 marks**

An iron needs to be heated to a temperature between 230 °F and 280 °F.

State the measurement in the form:

nominal value  $\pm \frac{1}{2}$  (tolerance)

Do not round your final answer.

