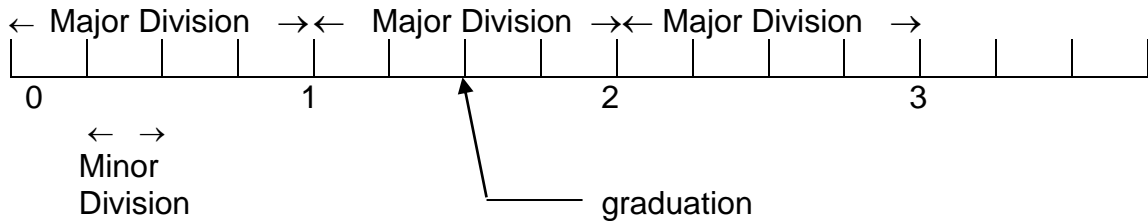


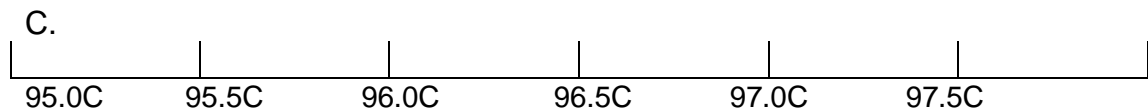
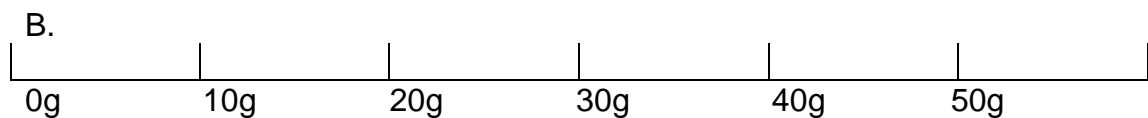
## Reading Scales

A scale is just a line which has been divided up into smaller parts called naturally enough divisions. Most scales have major divisions and minor divisions. The dividing lines on the scale are called graduations.



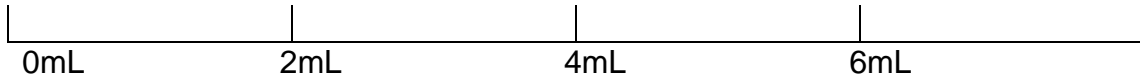
*Some answers are given in full at back to help you with working out.*

Q.1 Look at each of these scales and state the value of each major division.



Q2. Now let's consider Scale A again:

A.



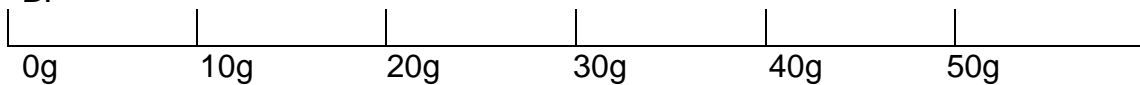
(a) Divide each major division of 2mL into 4 equal parts. Draw the resulting minor divisions onto the scale. Now what will be the value of each minor division?

(b) Show the positions of 0.5mL, 3.5mL and 6.5mL on the scale.

Q3. (a) Divide the major divisions of Scale B into 5 equal parts – show their position with reasonable accuracy on the scale.

(b) Now calculate the value of each minor division. Give your answer as a whole number together with the unit of measurement.

B.

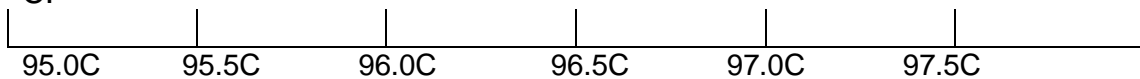


(c) Show the positions of 6g, 7g and 7.5g on the scale.

Q4. (a) Divide the major divisions of Scale C into two equal parts.

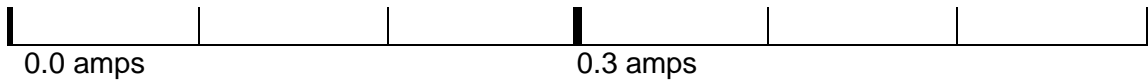
(b) Calculate the value of each minor division. Give your answer as a decimal together with the unit of measurement.

C.

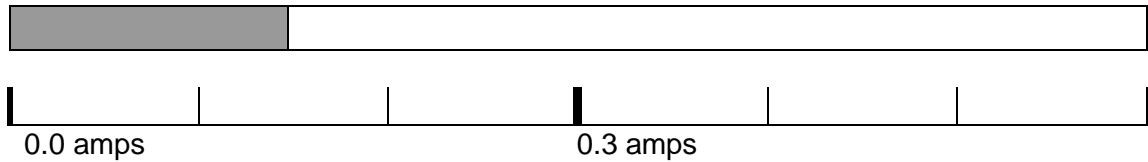


(c) Show the positions of 96.75 degrees Celsius and 98 degrees Celsius.

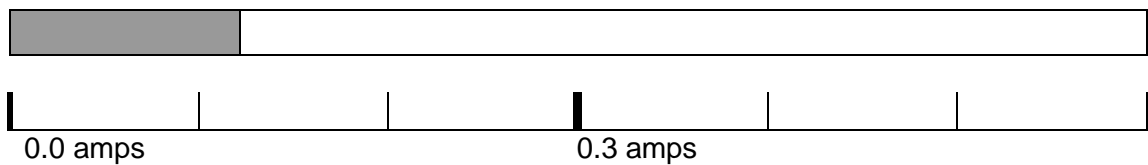
Q5. (a) Study this scale and work out the value of the minor divisions.



(b) The grey bar shows how many amps are being recorded on the scale. What is the reading?



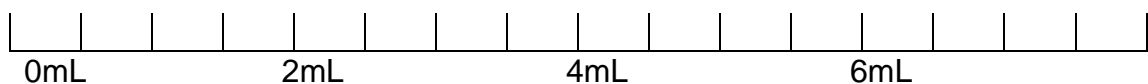
(c) The grey bar once shows how many amps are being recorded on the scale. What is the reading? *Hint: You will need to further split the minor division into smaller parts in order to estimate the reading.*



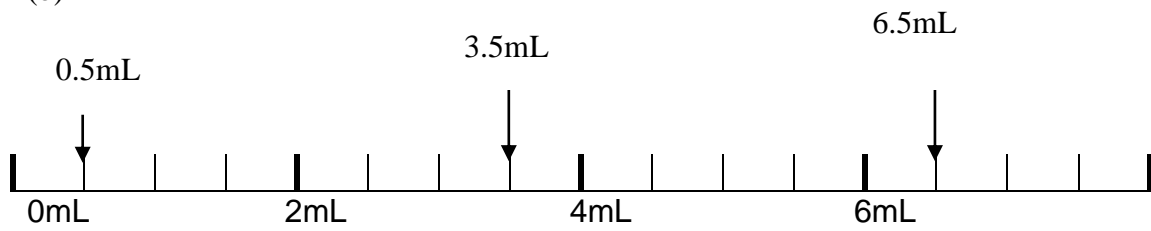
## Answers

- Q1. A. 2mL  
 B. 10 grams  
 C. 0.5 degrees Celsius

Q2. (a) Each minor division is:  $2\text{ mL} \div 4 = \frac{2\text{ mL}}{4} = \frac{1}{2}\text{ mL}$  or 0.5mL

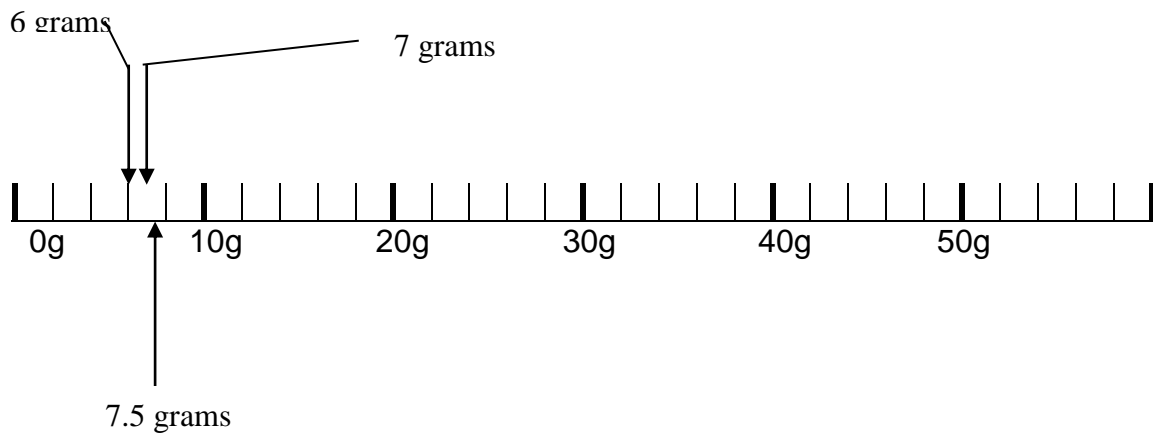


(b)



Q3. (a) Each minor division is:  $10 \text{ grams} \div 5 \text{ parts} = 2 \text{ grams}$

(b)



Q4. (a) Each minor division is:  $0.5 \text{ Celsius} \div 2 = \frac{0.5}{2} = 0.25 \text{ Celsius}$

(b)

