

**Homework 1**

1. Copy and complete the sentences below using words from the following list:

- balance                  beaker                  Bunsen burner                  clamp**  
**metre-stick              thermometer              temperature                  tripod**

- (a) A \_\_\_\_\_ is used to measure length.  
 (b) A \_\_\_\_\_ is used to find out how hot boiling water is.  
 (c) A \_\_\_\_\_ is used to find out how heavy things are.  
 (d) A thermometer measures \_\_\_\_\_.

2. The summer temperature in Iceland is 10°C. Wrens from Iceland have a wing length of 59 mm. On Shetland, where the summer temperature is 13°C, the wing length of wrens is 52 mm. The wing length of wrens in the Western Isles is 50 mm, where the summer temperature is 14°C. Mainland Scotland, with a summer temperature of 15°C, has wrens with the smallest wing length, only 48mm.

Use this information to copy and complete the table below.

Place	Summer temperature (°C)	Wing length of wren (mm)
Iceland		
Shetland		
Western Isles		
Mainland Scotland		

3. A Bunsen burner is set up in order to heat water in a beaker.

Copy and complete the paragraph, using the word bank.

**Word bank:      bubbles,   tripod,   heat mat,   safety glasses**

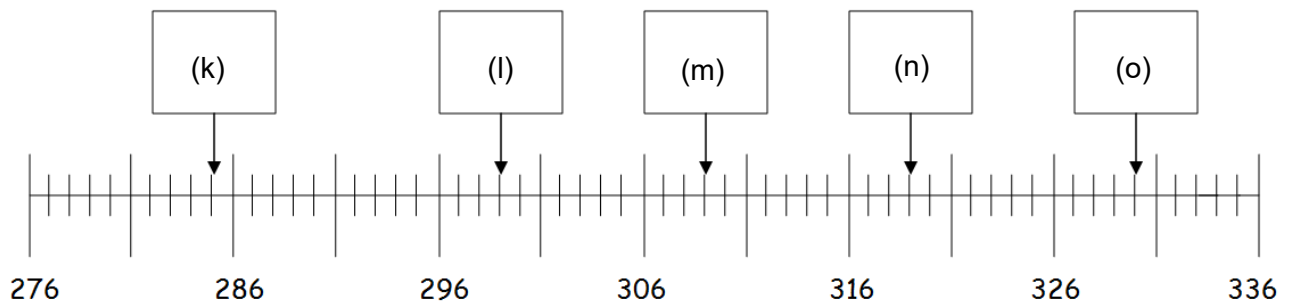
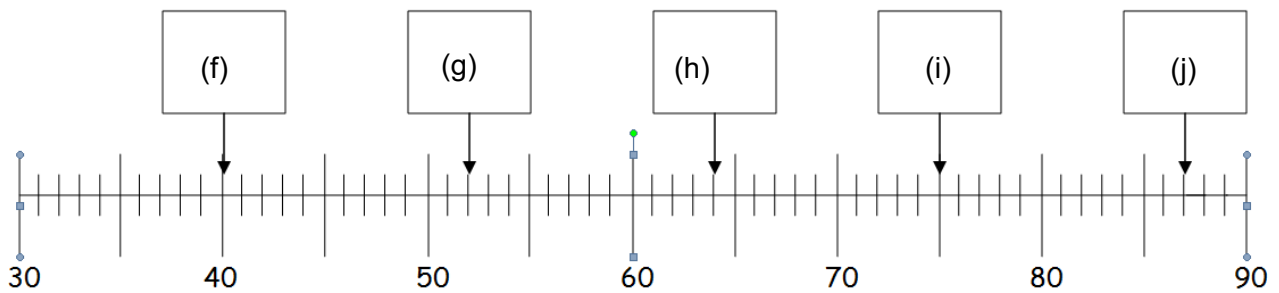
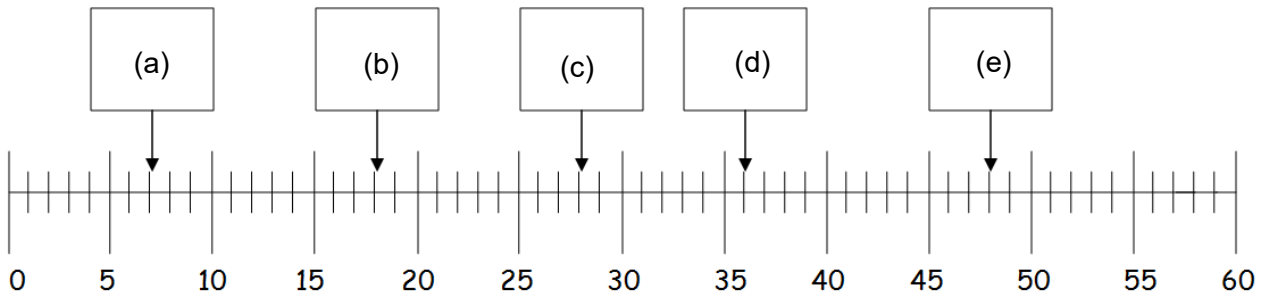
The Bunsen burner was placed onto the ..... The .....was placed over the Bunsen burner with the beaker on top of it. We knew the water was boiling when .....of gas were seen in the beaker. In order to carry out the experiment safely the whole class wore ..... to protect their eyes.

# S1 Measuring Homework

## Homework 1 (cont.)

4. To measure temperature a thermometer is used. Describe how a thermometer works in order to measure the temperature.

5. Read the values from the following scales:



## Homework 2

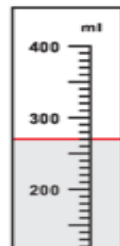
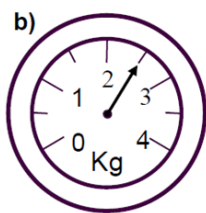
1. In science the word 'kilo' means one thousand. A kilogram contains one thousand grams. A kilometre contains one thousand metres.

How many -

- (a) grams in 2 kilograms
- (b) metres in 2.5 kilometres
- (c) kilometres in 10,500 metres
- (d) kilograms in 3,200 grams.

2. What are the readings on the scales below?

(a) (b)



3. Copy and complete the following table

Length (cm)	Breadth (cm)	Height (cm)	Volume (cm <sup>3</sup> )
6	4	2	
5	12	1.5	
8		6	96
10	10		1000

4. Copy and complete the following table

ml	cm <sup>3</sup>	litres
200		
480		
	8000	
		2.5

5. A stone of volume 25 cm<sup>3</sup> is dropped into a measuring cylinder containing 50 ml of water. What would be the new water level?

## S1 Measuring Homework

### Homework 3

1. A pupil, who is attempting to find the mass of a marble, discovers the mass of 500 marbles is 1kg. Calculate the mass of 1 marble.

2. A stack of 1000 sheets of paper is 100mm tall.
- (a) Calculate the thickness of one piece of paper.
- (b) How many sheets would you need to make a stack 150mm tall?



3. A pupil carried out an experiment to find the boiling point of a liquid. The pupil repeated the experiments 5 times to obtain the most reliable result possible. The following results were obtained:

**98°C, 100°C, 104°C, 100°C and 98°C.**

- (a) Find the mean boiling point of the liquid.
- (b) What liquid is the pupil using in the experiment?
4. The heights of some of the pupils in a class were measured in metres - these were
- 1.21m; 1.32m; 1.28m; 1.24m; 1.37m;**  
**1.41m; 1.37m; 1.36m; 1.24m; 1.20m.**
- (a) What was the mean height of the class in metres?
- (b) How many people were taller than average?
- (c) How many were smaller than average?
5. The scientific unit of time is the second. If you were to measure the time needed to boil 1 litre of water and you got an answer of 3 minutes then this should be written as 180 seconds.
- How many seconds are there in -
- (i) 1 minute  
(ii) 1 hour  
(iii) 1 day  
(iv) 1 week.

## S1 Measuring Homework