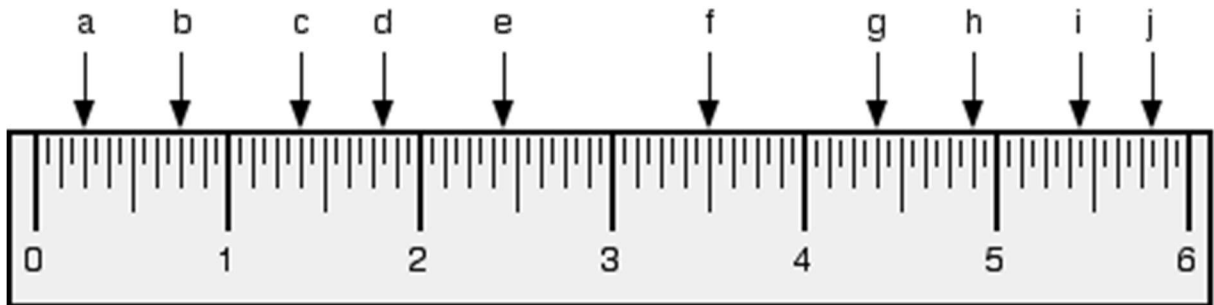


REVIEW

Unit 1 – Measurement and Conversions

Imperial	Imperial and SI	SI
1 foot = 12 inches	1 inch = 2.54 cm	1 cm = 10 mm
1 yard = 3 feet	1 foot = 30.48 cm	1 m = 100 cm
1 yard = 36 inches	1 yard = 0.9144 m	1 m = 1000 mm
1 mile = 1760 yards	1 mile ≈ 1.609 km	1 km = 1000 m
1 mile = 5280 feet		

1. Identify the location of each position on the imperial ruler:



a) _____

g) _____

d) _____

j) _____

2. Convert the following to inches (rounded to the nearest inch):

a) 5 feet _____

b) 8'4" _____

c) $2\frac{1}{3}$ yards _____



d) 10 cm

e) 50 mm

f) 1.5 m

3. Convert the following to centimeters (rounded to the nearest centimeter):

a) 70 mm

b) 2.7 m

c) 10 inches

d) 2 feet

e) 3 yards

f) 6'2"

4. Which SI unit of length would be most appropriate for measuring each of the following items?

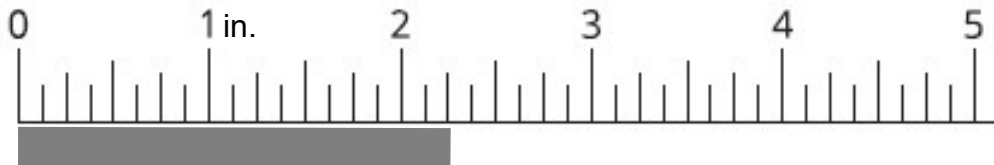
- a) the distance from Prince George to Vanderhoof _____
- b) the width of a cell phone _____
- c) the length of a football field _____
- d) the diameter of a straw _____

5. Which SI unit of length would be most appropriate for measuring each of the following items?

- a) the length of a pencil _____
- b) the length of a whiteboard _____
- c) the distance from Prince George to Smithers _____
- d) the perimeter of our school building _____

6. For each image, state the precision of the measuring device and determine the length of the item, including its uncertainty.

a)



precision: _____ length: _____ ± _____

b)



precision: _____ length: _____ ± _____

7. What are the precision and uncertainty of the following measurements?

Measurement	Precision	Uncertainty
170 kg		
12.5 °C		
22.62 cm		

8. Jon measured two sheets of plywood to be 1.50 m and 0.95 m long, using a tape measure marked in centimetres.

a) Write the lengths of each sheet of plywood in the form: *measured value* ± *measurement uncertainty*.

b) What is the total length, including uncertainty, of the two sheets if they are placed end to end?

c) Jon needs to shorten the 0.95-m piece of plywood. He cuts a 15-cm section from the end. What is the new length of this sheet, including uncertainty?

8. a) 150 cm ± 0.5 cm and 95 cm ± 0.5 cm b) 245 cm ± 1 cm c) 80 cm ± 1 cm

22.62 cm	0.01 cm ± 0.005 cm	(or 0.1 mm) (or 0.05 mm)
12.5 °C	0.1 °C ± 0.05 °C	
170 kg	1 kg ± 0.5 kg	
Measurement	Precision	Uncertainty

7. b) precision = 1 mm, length = 11.2 cm ± 0.05 cm (or 112 mm ± 0.5 mm)

6. a) precision = $\frac{1}{16}$ in, length = $2\frac{1}{16}$ in
 b) precision = $\frac{8}{16}$ in, length = $2\frac{4}{16}$ in

5. a) inches b) feet c) miles d) feet or yards

4. a) kilometres b) centimetres or millimetres c) metres d) millimetres

3. a) 7 cm b) 270 cm c) 25 cm d) 61 cm e) 274 cm f) 188 cm

2. a) 60 in b) 100 in c) 84 in d) 4 in e) 2 in f) 59 in

1. a) $\frac{1}{4}$ in d) $1\frac{1}{16}$ in g) $4\frac{8}{16}$ in j) $5\frac{16}{16}$ in