

# SHARP

## Worksheet 8 MEMO –Measurement of length, weight, volume & temperature

### Mathematical Literacy – Grade 10

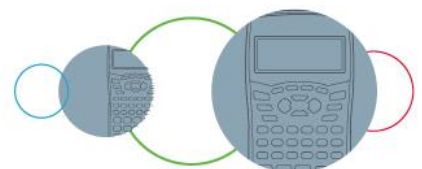
1. a)  $1.25 \text{ kg} \div 6 = 0.208 \text{ Kg per person}$   
 $0.208 \text{ Kg} \times 10 \text{ people} = 2.08 \text{ Kg must be added to the meal}$
- b)  $350 \text{ g} \div 6 = 58.33 \text{ g per person}$   
 $58.33 \text{ g} \times 10 = 583.33 \text{g for the meal}$   
 $583.33 \text{ g} \div 210 \text{ g} = 2.78 \text{ or } 3 \text{ onions must be added to the meal}$
- c)  $4 \text{ tablespoons} \div 6 \times 10 = 6\frac{2}{3} \text{ tablespoons plain yoghurt must be added to the meal}$
- d)  $6\frac{2}{3} \text{ tablespoons} \times 15 = 100 \text{ ml yoghurt}$
- e)  $570 \text{ ml} \div 6 \times 10 = 950 \text{ ml water}$
- f)  $950 \text{ ml} \div 570 \text{ ml} = 1\frac{2}{3} \text{ pints}$

2. a)  $1.25 \text{ kg} \times 1000 = 1250 \text{ g turmeric}$
- b)

Spice	Price per 100g
Cayenne Pepper	$R 124.38 \div 500 \times 100 = R 24.88$
Cinnamon (ground)	$R 374.75 \div 1000 \times 100 = R 37.48$
Coriander seeds	$R 93.66 \div 250 \times 100 = R 37.46$
Cumin seeds	$R 149.50 \div 400 \times 100 = R 37.38$
Fennel seeds	$R 387.43 \div 800 \times 100 = R 48.43$
Paprika	$R 215.94 \div 650 \times 100 = R 33.22$
Parsley	$R 709.96 \div 550 \times 100 = R 129.08$
Turmeric	$R 339.77 \div 1250 \times 1000 = R 27.18$

- c) Parsley. It costs R 129.08 per 100g
- d)  $R 48.43 \times 10 = R 484.30 \text{ per Kg of fennel seeds}$
- e)  $(R 37.48 \times 1.5) + (R 37.38 \times 2) + (R 33.22 \times 4) + (27.18 \times 3.5)$   
 $R 56.22 + R 74.76 + 132.88 + 95.13 = R 358.99$

3. a)  $600 \text{ yards} \times 0.9144 = 548.64 \text{ meters}$
- b)  $65\,789 \text{ inches} \times 0.0254 = 1671.04 \text{ meters}$
- c)  $2 \text{ feet} \times 30.48 = 60.96 \text{ cm}$

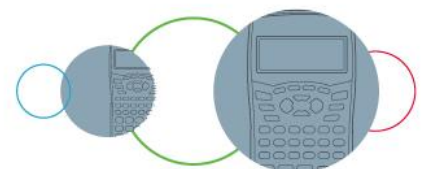


- d)  $2.5 \text{ inches} \times 2.540 = 6.35 \text{ cm}$   
 e)  $1969 \text{ feet} \times 0.3048 = 600.15 \text{ meters}$        $600.15 \text{ m} \div 1000 \approx 0.6 \text{ Km}$

4. a) The Central and Soweto branches are 4 cm apart on the map.  
*Allow  $\pm 2 \text{ mm}$  to allow for inaccuracy in measuring.*  
 b)  $4 \text{ cm} \times 20 \text{ Km} = 80 \text{ Km}$  apart in reality (76 Km ~ 84 Km)  
 c) The property is 1.5 cm from the office on the map  $\therefore 1.5 \text{ cm} \times 20 \text{ Km} = 30 \text{ Km}$   
*Allow  $\pm 2 \text{ mm}$  to allow for inaccuracy in measuring.*  
 4 trips from the office and back -  $30 \text{ Km} \times 2 \times 4 \text{ trips} = 240 \text{ Km}$  in total  
 d)  $240 \text{ Km} \times R 1.97 \text{ per Km} = R 472.80$   
 e) Central office is 2.4 cm from the client  
 Soweto office is 1.25 cm from the client  
 $\therefore$  Soweto office is responsible for this client.

5. a) Madrid (20°C)      b) Kharkiv (-3°C)  
 c) Dublin (13°C - 8°C = 5°C)      d) Budapest (19°C - 5°C = 14°C)  
 e) Min: °F = (1.8 × 6°C) + 32°      Max: °F = (1.8 × 19°C) + 32°  
 Min: 42.8°F      Max: 66.2°F

6. a)  $5 + 4 + 3 + 2 + 1 + 2 \text{ semi - finals} + 1 \text{ final} = 18 \text{ games in total}$   
 b)  $6 \text{ teams} \times 14 \text{ players} = 84 \text{ people entered the tournament}$   
 c)  $R 5 \times 14 \text{ in a team} = R 70 \text{ per team}$   
 d)  $18 \text{ games} \times 14 \text{ players} \times 2 \text{ teams} = 504 \text{ drinks needed}$   
 $504 \text{ drinks} \times 200 \text{ ml} = 100\,800 \text{ ml}$   
 $100\,800 \text{ ml} \div 1000 = 100.8 \text{ litres}$   
 e)  $504 \text{ drinks needed} \times 500 \text{ ml} = 252\,000 \text{ ml}$   
 $252\,000 \text{ ml} \div 1000 = 252 \text{ l of juice needed at the end of all the games}$   
 f)  $100.8 \text{ l} + 252 \text{ l} = 352.8 \text{ l in total}$   
 $352.8 \div 5 \text{ l containers} = 70.56$   
 $\therefore$  Gary will buy 70 of the 5 l containers and 2 of the 2l containers.  
 CHECK:  $70 \times 5 + 2 \times 2 = 354 \text{ l}$  (Only 1.2l of juice will be left over)  
 g)  $(R 58.20 \times 70) + (R 24.50 \times 2)$   
 $R 4\,074 + R 49.00 = R 4\,123$



7. a)  $22 \times 500g = 11000g$        $11000g \div 1000 = 11Kg$
- b)  $9Kg \times 1000 = 9000g$        $9000g \div 750g = 12$  Jars of mayonnaise in a box
- c)  $36 \text{ tins} \times R20.00 = R 720.00$  per box of coffee
- d)  $15 Kg \div 10 \text{ units} = 1.5 Kg$
- e)  $6 Kg \div 8 \text{ units} = 0.75Kg$        $0.75Kg \times 17 = 12.75 Kg$   
 $12.75 Kg \times 1000 = 12\ 750 g$  of meusli in 17 boxes
- f) i)  $(3 \times 22) + (4 \times 10) + (2 \times 8) + (2 \times 12) + (5 \times 36)$   
 $66 + 40 + 16 + 24 + 180 = 326$  units in total
- ii)  $(3 \times 11) + (4 \times 15) + (2 \times 6) + (2 \times 9) + (5 \times 9)$   
 $33 + 60 + 12 + 18 + 45 = 168 Kg$
- iii)  $(3 \times R 293.33) + (4 \times R 100) + (2 \times R 219.26) + (2 \times R 186.67) + (5 \times R 720)$   
 $R 879.99 + R 400 + R 438.52 + R 373.34 + R 3\ 600 = 5\ 691.85$

