

SHARP

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

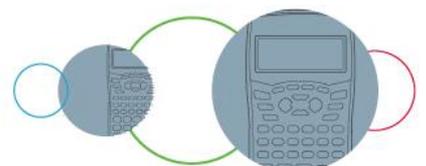
Mathematical Literacy – Grade 10

1. Mary wants to host a dinner party so she finds a great recipe for chicken curry that serves 6 people but she has invited 10 people to her dinner party

INGREDIENTS

1.25kg chicken pieces
350g onions, peeled
4cm cube of fresh ginger, peeled and coarsely chopped
6 cloves garlic, peeled
7 tablespoons vegetable oil
1 tablespoon ground coriander seeds
1 tablespoon ground cumin seeds
1/2 teaspoon ground turmeric
1/4 teaspoon cayenne pepper
4 tablespoons plain yoghurt
1 pint (570ml) water
225g tinned, chopped tomatoes
2 teaspoons salt
1/2 teaspoon garam masala
1 tablespoon fresh green coriander, finely chopped

- a) How much chicken should Mary use for the meal?
- b) If one onion has the equivalent mass of 210 g, approximately how many onions must Mary add to the meal?
- c) How many tablespoons of yoghurt must Mary add to the meal?
- d) Mary does not want to use a tablespoon as she wants to add all the ingredients in *ml* instead. Calculate how many *ml* of yoghurt Mary must add to the meal.
 $1 \text{ tablespoon} = 15 \text{ ml}$
- e) How much water (in *ml*) does Mary need to add to the meal for 10 people?
- f) How many pints of water does Mary add to her meal?



2. Jaya is the owner of THE SPICE DEN; use her pricelist given below to answer the questions that follow. Each packet comes in different sizes.

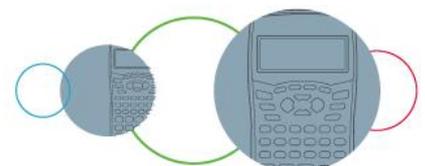
Spice	Number of grams	Price
Cayenne Pepper	500	R 124.38
Cinnamon (ground)	1000	R 374.75
Coriander seeds	250	R 93.66
Cumin seeds	400	R 149.50
Fennel seeds	800	R 387.43
Paprika	650	R 215.94
Parsley	550	R 709.96
Turmeric	1.250 Kg	R 339.77

- How many grams of turmeric can you buy for R 339.77?
- Calculate the cost of each of these 8 spices per 100g.
- Which spice is the most expensive per 100g?
- Calculate how much a person would pay for 1 Kg of fennel seeds.
- How much would a person pay if they bought 150g cinnamon, 200g cumin seeds, 400g paprika and 350g turmeric.

3. Use the conversion table below to do the conversions listed below.

FROM	TO				
	CENTIMETER	METER	INCHES	FEET	YARDS
CENTIMETER	1.0	0.01	0.3937	0.0328	0.0109
METER	100	1.0	39.37	32.81	1.0936
INCHES	2.540	0.0254	1.0	0.0833	0.0278
FEET	30.48	0.3048	12.0	1.0	0.3333
YARDS	91.44	0.9144	36.0	3.0	1.0

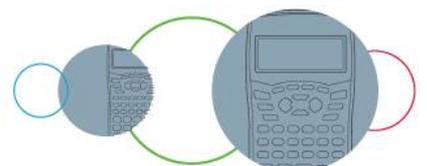
- Sarah walked 600 yards. How many meters did she walk?
- Johan drove 65 789 inches. How many meters did he drive?
- Lindiwe threw a ball 2 feet. How far did she throw the ball (in centimeters)?
- Janet has grown 2.5 inches in 1 year. How many centimeters did she grow?
- The road is 1969 feet long. How long is the road in **kilometers**?



4. Happy Homes is an estate agency in Gauteng that has offices in each region (indicated by the circles on the map). Use the diagram below to answer the questions that follow.



- Sam is the manager of the Central branch as well as the Soweto branch of Happy Homes. How far would be the two branches from each other on the map?
- How far are the two branches that Sam manages in reality?
- Joe works in the East branch of Happy Homes, he has a client, indicated on the map by the symbol ▲, he goes out to do an initial site visit and three more visits before the property is sold. How far did Joe drive for this client?
- Joe can claim petrol for his trips to see the clients, trips are claimed from the office to the client and back. Petrol is claimed back at R1.97 / Km. How much money does Joe get back for petrol?
- The manager of the Central branch has a dispute with the manager of the Soweto branch stating that the client indicated by the star should deal with the Central branch. Head office indicates that the branch that is closest to the client should help them. Who is supposed to help this client?



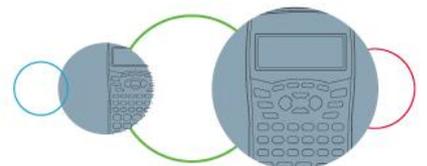
5. The table below shows the minimum and maximum temperatures of various cities in Europe one day during spring. Use the table to answer the questions that follow.

City	Min (°C)	Max (°C)
Athens	13	19
Budapest	5	19
Dublin	8	13
Kharkiv	-3	5
London	10	16
Madrid	10	20
Prague	6	19

- Which city has the highest maximum temperature?
- Which city has the lowest minimum temperature?
- Which city has the most moderate climate? (the smallest change between minimum and maximum temperature) What is the difference between these two temperatures?
- Which city has the largest change between minimum and maximum?
- Jody lives in the United States and is going to visit Prague. Convert the temperatures into Fahrenheit for Jody because they use degrees Fahrenheit instead of degrees Celsius.

Use the following formula: $^{\circ}\text{F} = (1.8 \times ^{\circ}\text{C}) + 32^{\circ}$

6. Gary is organising a soccer fun day for his local soccer club to raise funds. He has to organise drinks for half time and for after each game for all the teams that enter the tournament.
- 6 teams enter the tournament and each team plays every other team once to determine the top 4 teams, who will then play 2 semi-finals and a final match. How many games in total will be played at the tournament?
 - If there are 14 members of each team (3 substitutes) how many players in total have entered the fundraising tournament?
 - It costs R 5 for each member to enter the tournament, what is the total cost to enter per team?
 - Gary does some research and he finds out that the optimal amount of liquid a player should drink during half time is 200 ml. How many litres of juice must be ready for the players at half time during all the games?



- e) After a game, a player should drink 500 ml of liquid to replenish the fluids lost during the game. How many litres of juice should Gary buy for the end of all the games in the tournament?
- f) Gary goes to buy juice for the games and he finds it in 2 l containers and 5 l containers. How many of each container should he buy if he wants to have as little left over as possible?
- g) The juice costs $R\ 24.50$ for 2 l and $R\ 58.20$ for 5 l . What does Gary pay for the juice?

7. Dumisani owns a Spaza Shop and he buys a whole lot of products in bulk boxes. Use the information given below about the products to answer the following questions.

Product	Mass (Kg) Per box	Cost Price (R) Per box	Number of units in a box
Sugar		293.33	22
Rice	15	100.00	10
Meusli	6	219.26	8
Mayonnaise	9	186.67	
Coffee	9		36

- a) What is the mass of a box of sugar if each unit weighs 500 g ?
- b) How many jars of mayonnaise are in a box if each jar weighs 750 g ?
- c) What is the price of a box of coffee if the tins of coffee cost $R\ 20.00$ each?
- d) What is the mass of one bag of rice?
- e) What is the mass of 17 units of musli? (in grams)
- f) Dumisani ordered 3 boxes of sugar, 4 boxes of rice, 2 boxes of muesli, 2 boxes of mayonnaise and 5 boxes of coffee.
 - i) How many units in total did he buy?
 - ii) What is the total mass of his order?
 - iii) What is the cost price of the order?

