LIMPOPO MATHS AND SCIENCE ACADEMY

LIMSA

GRADE 12

## Mathematical Literacy

23-27 MARCH 2020

WEEKLY WORKSHEET

QUESTION 1

1.1. Limpopo Maths and Science Academy Projecct manager (Mr Mathiane) wants to go on a trip to Kilimanjaro the agent said: If you fly with South African Airways direct to Kilimanjaro Airport on the 4th of April 2020 and return on the 11th of April 2020, Your ticket will cost R7 288, but those tickets are sold out. you now have to fly to Nairobi, Kenya and then to Kilimanjaro Airport. If you fly with S.A Airways to Nairobi Airport, you will pay   R6 915. Then you have to pay $400 (US dollars) to fly with Kenya Airport to Kilimanjaro Airport.

1.1.1   What will the total fees be in rands, if you fly to Nairobi and then to kilimanjaro Airport, If 1US dollar = R7,64642? (4)

1.1.2   What is the Difference in price between flying direct to Kilimanjaro Airport or travelling via Nairobi? (2)

1.1.3   If you do not want to spend that amount of money on airfare from Nairobi to Kilimanjaro Airport, you can take a bus for about $25 per person one way, What will you pay in rands both ways? (3)

1.1.4   the bus drive from Nairobi to Kilimanjaro Airport takes 5hours 45minutes. How long will you be in bus to and from Kilimanjaro? (2)

1.1.5   The plane from South African (OR Tambo) leaves at 09:40 and arrives at Kilimanjaro Airport at 14:45. How long was the flight?   (3)

QUESTION 2

2.1   Mr Buka wants to buy a car while surfing the internet he stumbled on the following advertisement.
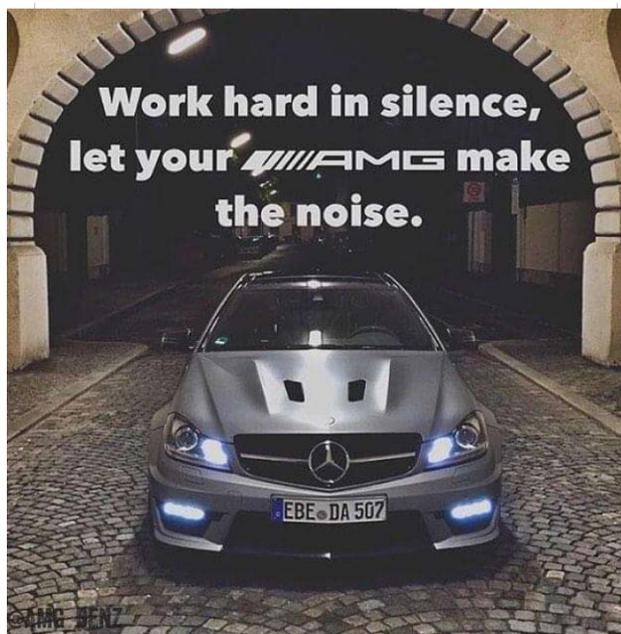
Direct pice: $81 420   Save 7%

Estimated Monthly Payment: $1 357 per month

2.1.1 Calculate the price of the car before the 7% saving (2)

2.1.2 What is the price of the car, in the advertisement, in rands if 1$=R7,37 (2)

2.1.3 What is Mr Buka's estimated monthly payment in rand? (2)

2.1.4 If the consumption of the car is 22 miles per gallon in the city, What is the consumption in Kilometres/ litre? (use 1mile=1,6093km)   (2)

QUESTION 3

3.1 To travel to work Miss Letswalo has two options
    Option1: She can take a bus to the train station and take the trsin to her destination, the bus fare is R9 and the train ticket cost R14,50
    Option2: Is for Miss Letswalo to drive directly from her home to her work. Miss Letswalo lives 22 kilometres from work by car.
she has calculated that is costs R1,80 per kilometre, for both fuel and wear and tear on the car.

3.1.1 is it cheaper for Miss Letswalo to use bus and train to get to work or to go by car ? (2)

3.1.2 if the train travel a distance of 21km along the railway lines, how much does it costs to travel by train per kilomtre? Give your answer correct to nearest cents. (3)

3.1.3 if public transport increases by 7% how will it cost Miss Letswalo to take the bus and train to work. (2)

QUESTION 4

4.1 Mr Msemburi is a director at LIMSA and earns R1 285 456 p.a.

    4.1.1 Write down the abbreviation p.a. in full. (2)

    4.1.2 Write R1 285 456 in words. (2)

    4.1.3 Round off R1 285 456 to the nearest hundred. (2)

4.2 Study TABLE 1 below that shows the items Mr Musemburi bought from
Spar in Mokopane and answer the questions that follow.
(Some information is omitted.)

    TABLE 1: Items Mr Musemburi bought

	Item	Prices excluding VAT
1:	Marina salt 500 g	R3,99
2:	Maize meal 2,5 kg	R29,99*
3:	I&J fish fingers 400 g	R59,98
4:	Jumbo eggs (1 dozen)	R17,99
5:	150 mℓ of cooking oil	R13,99
	*0,00% VAT Rate	
	15% VAT Rate	

4.2 4.2.1 Calculate the price of ONE egg. (2)

    4.2.2 Calculate the amount of VAT to be charged on I&J fish fingers of 400 g. (2)

    4.2.3 Convert 2,5 kg of maize meal into grams. (1 000 g = 1 kg) (2)

    4.2.4 Calculate the number of grams for a 150 mℓ cooking oil if 10 mℓ weighs 8 g. (2)

4.3 Koketso mixed orange juice with water in the ratio 1 : 5 to serve to parents at a parents meeting.

Determine the number of glasses of water used to mix 10 glasses of orange juice. (2)

4.4 The LIMSA programme for 2020 parents meeting was designed on an A4 sheet of paper with length of 0,294 m. Give this length in centimetres (cm). Given that 1 cm = 0,01 m. (2)

QUESTION 5

5.1 | TABLE 2 below shows the income and expenditure statement for the period 2015 and 2016 for Jony and Brothers business venture in King William's Town.

Use the information in TABLE 2 to answer the questions that follow.

TABLE 2

Income			Expenditure		
Details	**2015**	**2016**	**Details**	**2015**	**2016**
Fee income	260 000	316 000	Bank fees	1 080	1140
Interest received	2 600	2 860	Salaries	160 000	160 400
			Insurance	6 600	7 400
			Water and electricity	2 400	2600
			Cellphones	9 600	10 400
			Postage	280	360
			Depreciation	4 800	7 200
			Entertainment	1 400	1 600
			Cleaning	2 400	2 440
	262 600	**318 860**		**188 560**	----------
Total profit for 2015			----------		
Total profit for 2016			126 460		

Income and expenditure statement for the years 2015 and 2016 in Rands

5.1.1   Calculate the profit made in 2015.

You may use the formula: **Profit = Income – Expenditure**   (2)

5.1.2   Calculate the total expenditure incurred in 2016.   (2)

5.1.3   Identify ONE item whose value increased by 50% from 2015 to 2016.   (2)

5.1.4   Determine the percentage increase of salaries from 2015 to 2016.

Use the formula:
$$\% \textbf{ increase in salaries} = \frac{\textbf{increase in salaries}}{\textbf{salaries in 2015}} \times \textbf{100}$$
(3)

5.2 | Prince, LIMSA student intends to buy a cellphone. He was provided with options A, B and C by a service provider.

Option A
Contract that charges a monthly fixed cost of R500 for the calls made during the month not exceeding 800 minutes. (No calls allowed after the limit.)

Option B
Contract that charges a monthly fixed cost of R200 plus R1,50 for each minute called. (Cost (C) = 200 + 1,50 x number of minutes called in a month)

Option C
Pre-paid charges R2,50 for each minute called.
Cost (C) = 2,50 x number of minutes called in month):

The graph provided on ANSWER SHEET 1 represents options B and C. Use it to answer the following questions.

5.2.1   Identify the independent variable from the graph.   (2)

5.2.2   Draw a graph for option A on the graph provided on ANSWER
SHEET 1.   (3)

5.2.3   Use the graphs to identify the cheapest option for calls amounting to
200 minutes in a month.   (2)

5.2.4   Prince selected one option randomly. What is the probability that he
chose option C?   (2)

5.3 | Nelson used a paraffin heater pictured below during winter in 2016.

Capacity of the heater is 3 litres.

TABLE 3 below shows the cost per litre of paraffin for the period March 2016 to June 2016. Use the information to answer the questions that follow.

TABLE 3: Paraffin cost per litre for the given period

Period	2nd March – 5th April 2016	6thApril – 3rd June 2016
Cost per litre of paraffin	R5,60	P

2.3.1   Calculate the cost of paraffin bought in March 2016 to fill one heater.   (2)

5.3.2   Determine the value of **P** if the cost of a litre of paraffin increased by
        10% for the period 6th April – 3rd June 2016.   (3)

5.3.3   Nelson uses one full tank of the heater every two nights. Calculate the
        cost of paraffin she bought on 1st June 2016 to use in that month.   (3)

ANSWER SHEET

NAME: --

QUESTION 5.2.2

GRAPH SHOWING PHONE DEAL OPTIONS B AND C;
(LEARNER TO DRAW OPTION A)