

**RATU NAVULA COLLEGE****Y11 LIFE MATHEMATICS**  
**WORKSHEET 8 QP****STRAND 1 SOCIAL MATHEMATICS**

1.
  - a. Explain the term hire purchase.
  - b. State one advantage of hire purchase for the consumer.
  - c. State one disadvantage of hire purchase for the consumer.
  
2. Jim is paid on a piecework basis at a rate of \$1.50 cents for each piece up to 150 pieces per week. For any pieces produced in excess of 150 pieces, he receives \$1.75 for each piece. In one week he produced 290 pieces. Calculate his weekly wage.
  
3. A car travelled 100 km in 2 hours and used \$40 worth of fuel. 1 litre of fuel cost \$2.
  - a. How many litres of fuel were used?
  - b. If the car's fuel tank has a volume of 40 L, how much money was needed to fill the tank to full capacity?
  
- c. What was the average speed of the journey?
  
4.
  - a. Explain the term PAYE.
  - b. Give two examples of how PAYE contributions are used by the government.
  
5. The rate for water usage is given as:
  - up to 50 units: \$0.15
  - for each unit over 50 and up to 100: \$0.45
  - for each unit over 100: \$0.85

This can be written as

  - 0 - 50 units \$0.15
  - 50 - 100 units \$0.45
  - 101 units and more \$0.85

\*1 unit = 1m<sup>3</sup>

Calculate the cost of using:

  - a. 40 units
  - b. 85 units
  - c. 200 units
  - d. 150 m<sup>3</sup>

6. Calculate the BMI of an adult whose weight is 70kg and height is 1.75 m.

7. Rose is comparing two different models of car.

- Car A uses fuel at the rate of 12 L /100 km.
- Car B uses 9 L /100 km.

Suppose Rose plans on driving 7000 km in a year, how much less fuel will she use driving car B instead of car A?

8. a. Explain the term gross pay.  
 b. Name a compulsory deduction taken from gross pay.  
 c. Name a voluntary deduction that may be made from an employee's salary/wage.

9. The table below shows the time taken to run 100m.

Senior Boy's 100m		
Pita	12.1s	Gold
Kele	12.3s	Silver
John	12.6s	Bronze

- a. Calculate the **time difference** between bronze and gold medallists?
- b. Calculate Kele's **speed**.
- c. How **far** Kele travelled in 12.1s?
- d. Determine the distance still to be travelled by Kele when Pita crossed the finish line.
10. In a netball game Ana scored 7 goals from 13 shots and Keli scored 12 goals from 17 shots.
- a. Calculate the **success rate** for each player.
- b. Who has the **better** success rate?
- c. If Ana wanted to increase her success rate to 80% or better, what would be the **least** number of goals she could score from 13 shots?

11. Shown below is a part of Residents Tax Rates.

Income (\$)	Tax Payable (\$)
0 – 30,000	Nil
30,001 – 50,000	18% of excess over \$30,000
50,001 – 270,000	\$3,600 + 20% of excess over \$50,000

Using the table given above, what is the **tax payable** on :

- (a) \$29 000?
- (b) \$35 000?
- (c) \$56 000?

12. Mere prepared her family budget as follows:

Mere's Monthly Budget		
<b>Income</b>	Monthly net pay	\$1050.00
<b>Expenses</b>		
	Food	\$300.00
	Bus fare	\$65.00
	Rent	\$200.00
	Bills	\$30.00
	Medical	\$40.00
	Clothing	\$50.00
	Miscellaneous	\$40.00
<b>Total Expenses</b>		\$725.00
	<b>Savings</b>	<input type="text"/>

- a. Is this budget a balanced budget?  
Give a reason for your answer.
- b. How much does Mere save in a month?
- c. How much will she save in a year?

- d. Will Mere save enough money in 4 months to buy a radio which costs \$1350 if she keeps to her budget? Justify your answer with suitable calculations.

## STRAND 2 MEASUREMENTS

13. Which SI unit will you use to measure the following?

- (a) distance
- (b) time
- (c) mass
- (d) temperature

14. Complete the following statements:

- (a)  $1\mu\text{g} = \text{_____ g}$
- (b)  $1\text{ms} = \text{_____ s}$
- (c)  $1\text{kg} = \text{_____ g}$
- (d)  $1\text{Mm} = \text{_____ m}$

15. Which is the larger unit in each case?

- (a) metre or kilometer
- (b) kilobyte or megabyte
- (c) centimetre or micrometer
- (d) kilometre or metre

16. For a rugby competition, a try equaled 5 points and a conversion equaled 2 points. How many tries were scored by a team that scored 48 points and converted 4 of their tries?

THE END