

Exam Revision | LU1 – LU3

Answers will be given in the Exam Revision Collab on the 16th of November

Learning Unit 1: Introduction to Numeracy

1. Round 124.67293619 to:
 - a. Three decimal places
 - b. Four decimal places
 - c. Seven decimal places
2. Round the number 1 253 379 to:
 - a. Two significant figures
 - b. Four significant figures
 - c. Six significant figures
3. Round the figure 0.0315284 to:
 - a. Five significant figures
 - b. Four significant figures
 - c. Three significant figures
4. If your salary increases from R6 500 to R8 500 from one year to the next, what is the percentage increase (round off to two decimal places)?
5. An academic program at a university has 2 354 female learners. The ratio of female learners to male learners is 11:8.
 - a. How many male learners are there in the program group?
 - b. How many learners are there in total?

Learning Unit 2: Algebra

1. Solve the following equations:
 - a. $\frac{3h}{4} = 12$
 - b. $3t - 5 = t + 7$
 - c. $3(x - 4) + 6 = x + 4$
2. Simplify the following: $(2x - 3y)^2$

3. Factorise the following expression: $3x^2y - 12x^2y^4 + 6xy$
4. Determine the solution to the following inequality: $-7(4z + 2a) \leq 14(6 - 2z)$
5. Determine the linear function of the line that goes through the points (1, 8) and (3, 14).
6. Given the following simultaneous equations, solve for x and y.

$$6x - 2y = 22$$

$$4x - 4y = 4$$

7. The total amount of money earned from the sale of an item is determined by the price of the item and the number of units of that item which are sold.
 - a. Create an algebraic expression to describe this scenario. Use this algebraic expression to determine the total amount of money earned from the sale of an item that costs R25.75, if 1 055 units of the item are sold.
 - b. Manipulate the algebraic expression created for the previous question, so that the price of the item becomes the subject. Using this new expression, determine the price of an item if the sale of 495 units generates a total value of R390 802.50.
8. For a company to make a profit or break-even when manufacturing a product, the total value of sales generated by the number of units of this product must be greater than or equal to the total cost of producing that number of units:
 - a. Express this as an algebraic inequality.
 - b. Will this inequality be valid if the sale of 23 500 units at R65.75 each cost the company R650 000 in overheads plus a production cost of R37.85 per unit manufactured? Will the company make a profit?

Learning Unit 3: Using Tables & Graphs

1. The number of students in a class is an example of:
 - a. Discrete data
 - b. Qualitative data
 - c. Nominal-scale data
 - d. Continuous data
2. The height of the students in a class is an example of:

- a. Discrete data
 - b. Qualitative data
 - c. Nominal-scale data
 - d. Continuous data
3. The following grouped frequency distribution table indicates the time taken by a sample of potential employees to complete a psychometric test:

Time (minutes)	Number of potential employees (f)	%f (frequency as a % of the total)	X (midpoint of the class intervals)	%F (cumulative less than percentage frequency)
5 - < 8	3	12		
8 - < 11	5	20		
11 - < 14	8	32		
14 - < 17	9	36		
Total	N = 25	100		

- a) Complete the table by inserting the correct values for the midpoint (x) and cumulative less than percentage frequency (%F) columns.
- b) Draw a frequency polygon for the number of potential employees in each class.
- c) Draw a cumulative less than frequency polygon for the percentage frequency values.