



**UNIVERSITI TEKNOLOGI MARA
QUIZ (SET 2)**

COURSE	:	BUSINESS MATHEMATICS
COURSE CODE	:	MAT112
DATE	:	NOVEMBER 2022
TIME	:	1 HOUR

INSTRUCTIONS TO CANDIDATES

1. This question paper consists of **TWO (2)** questions.
2. Answer **ALL** questions in the blank space provided.
3. Calculator can be used.
4. Do not bring any material into the examination room unless permission is given by the invigilator.
5. Please write your answer on papers using a pen.
6. Make sure your answer papers are **readable**. Write your answers **clearly** with your full name, group and student ID.
7. Answer ALL questions in English.

NAME : _____

STUDENT NO. : _____

GROUP : _____

LECTURER : _____

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

This examination paper consists of 5 printed pages

QUESTION 1

a) Fill in the blank spaces below with the correct answers.

Fraction	Decimal	Percentage (%)
	5.875	
$\frac{37}{50}$		74%

(3 marks)

b) Find the value of y for the following linear equations:

i) $\frac{3}{2}y + 2 = y - 5$

(3 marks)

ii) $\frac{3}{4}(8 - 12y) + \frac{1}{4} = y + 7$

(4 marks)

QUESTION 2

a) Given an arithmetic sequence: 50, 33, 16, -1, ... Find the 15th term of the sequence.
(2 marks)

b) The seventh term and the tenth term of an arithmetic sequence are 39 and 51, respectively.
Find:

i) the first term and the common difference
(6 marks)

ii) the sum of the first 15 terms of the sequence
(2 marks)

- c) The eleventh term of a geometric sequence is 15360. If the first term is 15, find the common ratio of the sequence.

(4 marks)

- d) The first term of a geometric sequence is $\frac{1}{4}$ and its last term is $\frac{2187}{512}$. If the common ratio is $\frac{3}{2}$, find:

- i) the number of terms in the sequence

(4 marks)

- ii) the sum of all the sequences.

(2 marks)

END OF QUESTION PAPER

APPENDIX 1

LIST OF FORMULA

1. $T_n = a + (n - 1)d$	2. $S_n = \frac{n}{2}[2a + (n - 1)d]$
3. $T_n = ar^{n-1}$	4. $S_n = \frac{a(r^n - 1)}{r - 1}$