UNIVERSITI TEKNOLOGI MARA
QUIZ (SET 4)

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 (%)
$2\dfrac{7}{14}$		
	34.55	3455 %

(3 marks)

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

i) $10 + 2(4 - 8y) = -3(1 - y)$

(3 marks)

ii) $\dfrac{3(y + 2)}{4} - 6 = \dfrac{y}{8}$

(4 marks)

QUESTION 2

a) The twelfth term and the sixth term of an arithmetic sequence are 70 and 34, respectively. Find the first term and the common difference of the sequence.

(6 marks)

b) A building has 30 floors. The cleaning cost for the second floor is RM150, the third floor is RM200, the fourth floor is RM250, and so on. Find the cleaning cost for the first floor and the whole building.

(4 marks)

c) The last term of the geometric sequence is $-\dfrac{40}{6561}$. If the first term and the common ratio are -40 and $\dfrac{1}{3}$ respectively, find the number of terms in the sequence.

(4 marks)

d) The sum of the first six terms of the geometric sequence is 819. If the common ratio is 4, find

i) the first term of the sequence.

(4 marks)

ii) the twelfth term of the sequence.

(2 marks)

END OF QUESTION PAPER

APPENDIX 1

LIST OF FORMULA

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