UNIVERSITI TEKNOLOGI MARA
QUIZ (SET 3)

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 (%)
		298 %
$\dfrac{9}{40}$	0.225	

(3 marks)

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

i) $2x - 5 = -3(x - 4)$

(3 marks)

ii) $\dfrac{y - 5}{4} = 2(y + 3) - 1$

(4 marks)

QUESTION 2

a) Hamzah bought a new smartphone by paying a monthly installment for 15 months. He made a first payment of RM100 and for each consecutive month, the payment increases by RM12. Find the last amount that Hamzah paid.

(2 marks)

b) The sum of the first five terms and the sum of the first ten terms of an arithmetic sequence are 125 and 400, respectively. Find

  i) the first term and the common difference.

(6 marks)

  ii) the 20th term.

(2 marks)

c) The ninth term of a geometric sequence is 26244. If the first term is 4, find the common ratio of the sequence.

(4 marks)

d) The first term of a geometric sequence is $\dfrac{37}{11}$ and its last term is $\dfrac{2368}{8019}$. If the common ratio is $\dfrac{2}{3}$, find

i) the number of terms in the sequence.

(4 marks)

ii) the sum of all terms in 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. $S_n = \dfrac{a(r^n - 1)}{r - 1}$