اونيۏرسيتي مليسيا ڤهڠ السلطان عبد الله
UNIVERSITI MALAYSIA PAHANG
AL-SULTAN ABDULLAH

ASSIGNMENT

INTERMEDIATE MATHEMATICS
BUM1153
SESSION 2024/2025 SEMESTER I

Name :

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Student ID:

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TOPIC : CHAPTER 4 (Lines of Best Fit)

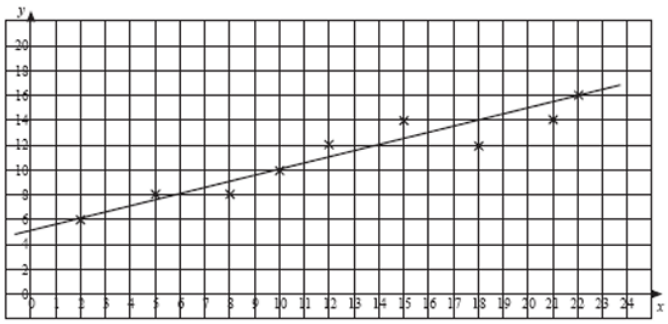
QUESTION

Lecture Slides (Exercise 1, 2 and 3)

Tutorial (Question no 8, 9 and 10)

Note: Please use graph paper to plot and draw the graph accurately.

EXERCISE 1



(i) Based on the graph, determine the equation of the line of best fit.

(ii) Use the equation to estimate y when $x = 4$.

(iii) Use the equation to estimate x when $y = 18$.

EXERCISE 2

Draw a line of best fit for the data given below.

x	2	3	4	5	6	7
y	3.5	3.77	4.0	4.24	4.5	4.74

Based on the graph, determine

(i) the values of gradient and $y-$intercept.

(ii) the equation of the line of best fit.

(iii) the value of y when $x=6$.

EXERCISE 3

The table shows the experimental values obtained for the function $y = mx + c$, where m and c are constants.

x	2	4	6	8	10	12
y	3.4	-1.6	-6.5	-11.7	-16.8	-21.4

Draw a straight line graph for the given data. Based on the graph, determine

(i) the values of m and c.

(ii) the equation of the line of best fit.

(iii) the value of y when $x = 5.6$.

(iv) the value of x when $y = -15.5$.

8. Draw a line of best fit on graph paper for the data given below.

x	0	0	0.5	1.5	2	2.5
y	-4	-3	-1.5	1	3	4

Based on the graph, determine

(i) the values of gradient and y-intercept.

(ii) the equation of the line of best fit.

(iii) the value of y when $x = 2.5$.

(iv) the value of x when $y = 8$.

9. Draw a line of best fit on graph paper for the data given below.

x	-2	-1	0	1	2	3
y	4	2	1	-2	-1	-2

Based on the graph, determine

(i) the values of gradient and y-intercept.

(ii) the equation of the line of best fit.

(iii) the value of y when $x = -6$.

(iv) the value of x when $y = 7$.

10. Draw a line of best fit on graph paper for the data given below.

x	1	2	3	4	5	6	7	8
y	19	15	13	11	10	8	7	5

Based on the graph, determine

(i) the values of gradient and y-intercept.

(ii) the equation of the line of best fit.

(iii) the value of y when $x = 3.1$.

(iv) the value of x when $y = 17$.