

|                                                                                                                                                                                                                                                                                                      |              |                             |            |                                  |          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------|------------|----------------------------------|----------|
|  <b>KEMENTERIAN<br/>PENDIDIKAN<br/>MALAYSIA</b><br> <b>POLITEKNIK<br/>MALAYSIA</b><br><b>JABATAN MATEMATIK, SAINS DAN KOMPUTER</b> |              | COURSE CODE/<br>COURSE NAME |            | PBM1035 INTENSIVE<br>MATHEMATICS |          |
|                                                                                                                                                                                                                                                                                                      |              | COURSEWORK<br>ASSESSMENT    |            | END OF CHAPTER 2                 |          |
|                                                                                                                                                                                                                                                                                                      |              | SESSION                     |            | DECEMBER 2018                    |          |
|                                                                                                                                                                                                                                                                                                      |              | DURATION                    | 60<br>MINS | CLO1                             | 20 MARKS |
| CLO2                                                                                                                                                                                                                                                                                                 |              |                             |            |                                  |          |
| CLO3                                                                                                                                                                                                                                                                                                 |              |                             |            |                                  |          |
| NAME                                                                                                                                                                                                                                                                                                 | NUR LYNN     | TOTAL MARKS                 |            | 20 MARKS                         |          |
| REGISTRATION NO.                                                                                                                                                                                                                                                                                     | 051PPI8P2018 |                             |            |                                  |          |
| PROGRAMME/ SECTION                                                                                                                                                                                                                                                                                   | IPP1         |                             |            |                                  |          |

### Instructions

- Answer ALL questions. Write your answers in the spaces provided.
- Show your working to get marks. You may use a non-programmable scientific calculator.

### Question 1

CLO1, C2

[2 marks]

Given a function  $f(x) = -3x^2 + 2x + 4$ , identify  $f(-5)$  and  $f(0)$ .

### Question 2

CLO1, C2

[5 marks]

- (a) Complete the following table for the function of a straight line  $y = 6x - 3$  for range  $-2 \leq x \leq 2$ .

|     |     |    |    |   |   |
|-----|-----|----|----|---|---|
| $x$ | -2  | -1 | 0  | 1 | 2 |
| $y$ | -15 | -9 | -3 | 3 | 9 |

CLO1, C3

[4 marks]

- (b) Plot the graph of straight line  $y = 6x - 3$  for range  $-2 \leq x \leq 2$ .

### Question 3

CLO1, C2

[3 marks]

Given the straight line AB with the equation of  $y = 2x - 3$ .

- (a) Identify the y-intercept and x-intercept.

CLO1, C3

[4 marks]

- (b) Given another equation  $y = -2x + 3$ . Draw the graph of both lines on the same graph paper.

CLO1, C3

[2 marks]

- (c) Graphically, identify the intersection point of these two lines.

Q1

$$f(x) = -3x^2 + 2x + 4$$

$$f(-5) = -3(-5)^2 + 2(-5) + 4$$

$$= -75 - 10 + 4$$

$$= -81$$

$$f(0) = -3(0)^2 + 2(0) + 4$$

$$= 4$$

Q2

(a)  $y = 6x - 3$

when  $x = -2$

$$= 6(-2) - 3$$

$$= -15$$

when  $x = -1$

$$= 6(-1) - 3$$

$$= -9$$

when  $x = 0$

$$= 6(0) - 3$$

$$= -3$$

when  $x = 1$

$$= 6(1) - 3$$

$$= 3$$

when  $x = 2$

$$= 6(2) - 3$$

$$= 9$$



Q3

(a)  $y = 2x - 3$

$y = 0$

$0 = 2x - 3$

$2x - 3 = 0$

$\frac{2x}{2} = \frac{3}{2}$

$x = \frac{3}{2} = 1.5$

$(1.5, 0)$

$x = 0$

$y = 2(0) - 3$

$y = -3$

$(0, -3)$

(b)  $y = -2x + 3$

when  $x = 0$

$y = -2(0) + 3$

$= 3$

$(0, 3)$

when  $y = 0$

$0 = -2x + 3$

$\frac{3}{2} = \frac{2x}{2}$

$x = 1.5$

$(1.5, 0)$

(c)  $2x - 3 = -2x + 3$

$2x - 2x = \frac{4x}{1}$

$= \frac{6}{2}$

$= 3$

P



-3

-1

-1

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-1

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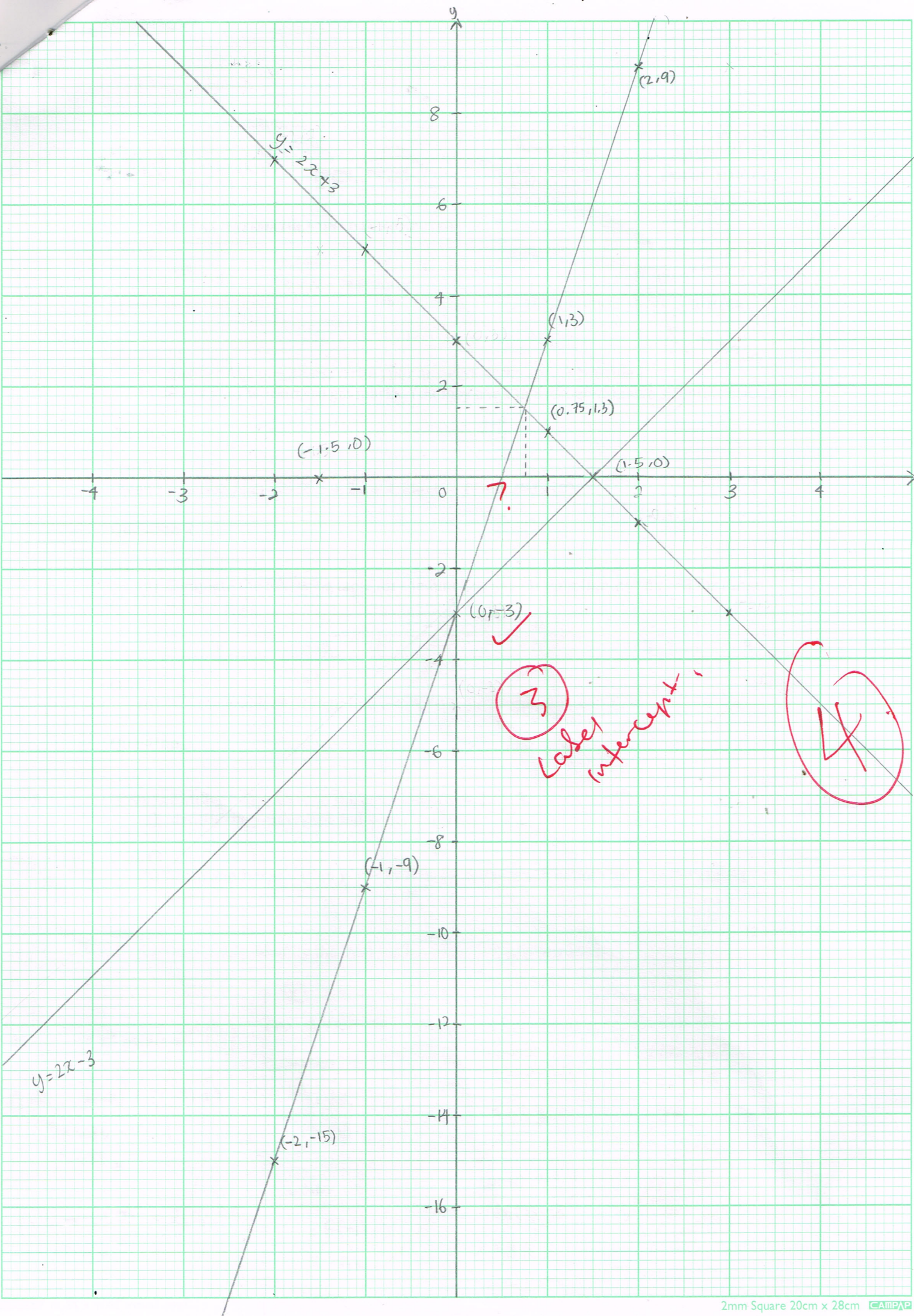
-1

-1

-1

-1







|                                                                                                                        |  |                                                                                                          |  |                             |      |                                  |  |  |
|------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------|--|-----------------------------|------|----------------------------------|--|--|
|  KEMENTERIA<br>PENDIDIKAN<br>MALAYSIA |  |  POLITEKNIK<br>MALAYSIA |  | COURSE CODE/<br>COURSE NAME |      | PBM1035 INTENSIVE<br>MATHEMATICS |  |  |
|                                                                                                                        |  |                                                                                                          |  | COURSEWORK<br>ASSESSMENT    |      | END OF CHAPTER 2                 |  |  |
|                                                                                                                        |  | JABATAN MATEMATIK, SAINS DAN KOMPUTER                                                                    |  | SESSION                     |      | DECEMBER 2018                    |  |  |
| NAME<br>MELLINA THERENT                                                                                                |  |                                                                                                          |  | DURATION<br>60<br>MINS      | CLO1 |                                  |  |  |
|                                                                                                                        |  |                                                                                                          |  |                             | CLO2 | 20 MARKS                         |  |  |
|                                                                                                                        |  |                                                                                                          |  |                             | CLO3 |                                  |  |  |
| REGISTRATION NO.<br>051PP18F2019                                                                                       |  |                                                                                                          |  |                             |      |                                  |  |  |
| PROGRAMME/ SECTION                                                                                                     |  | IPP1                                                                                                     |  | TOTAL MARKS                 |      | 20 MARKS                         |  |  |

### Instructions

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- Show your working to get marks. You may use a non-programmable scientific calculator.

### Question 1

CLO1, C2

[2 marks]

Given a function  $f(x) = -3x^2 + 2x + 4$ , identify  $f(-5)$  and  $f(0)$ .

### Question 2

CLO1, C2

[5 marks]

- (a) Complete the following table for the function of a straight line  $y = 6x - 3$  for range  $-2 \leq x \leq 2$ .

|   |     |    |    |   |   |
|---|-----|----|----|---|---|
| x | -2  | -1 | 0  | 1 | 2 |
| y | -15 | -9 | -3 | 3 | 9 |

CLO1, C3

[4 marks]

- (b) Plot the graph of straight line  $y = 6x - 3$  for range  $-2 \leq x \leq 2$ . (Tak pgh guna kertas graf)

### Question 3

CLO1, C2

[3 marks]

Given the straight line AB with the equation of  $y = 2x - 3$ .

- (a) Identify the y-intercept and x-intercept.

CLO1, C3

[4 marks]

- (b) Given another equation  $y = -2x + 3$ . Draw the graph of both lines on the same graph (graf paper) paper.

CLO1, C3

[2 marks]

- (c) Graphically, identify the intersection point of these two lines.

### Question 1

$$\begin{aligned}
 f(x) &= -3x^2 + 2x + 4 \\
 f(-5) &= -3(-5)^2 + 2(-5) + 4 \\
 &= -3(25) - 10 + 4 \\
 &= -75 - 10 + 4 \\
 &= -81
 \end{aligned}$$

### Question 2

$$\begin{aligned}
 a) y &= 6x - 3 \\
 y &= 6(-2) - 3 \\
 y &= -12 - 3 \\
 y &= -15 \\
 (x &= -1) \\
 y &= 6(-1) - 3 \\
 y &= -6 - 3 \\
 y &= -9
 \end{aligned}$$

$$\begin{aligned}
 (x &= 0) \\
 y &= 6(0) - 3 \\
 y &= -3
 \end{aligned}$$

$$\begin{aligned}
 (x &= 1) \\
 y &= 6(1) - 3 \\
 y &= 3
 \end{aligned}$$

$$\begin{aligned}
 (x &= 2) \\
 y &= 6(2) - 3 \\
 y &= 12 - 3 \\
 y &= 9
 \end{aligned}$$

5



### Question 3

a)  $y = 2x - 3$

When  $y = 0$

$$0 = 2x - 3$$

$$3 = 2x$$

$$\frac{3}{2} = x$$

$$x = \frac{3}{2} = 1.5$$

$x$ -intercept

When  $x = 0$

$$y = 2(0) - 3$$

$$y = -3$$

$y$ -intercept

b)  $-2x + 3$

$$y = 2(0) + 3$$

$$y = 3$$

$$0 = -2x + 3$$

$$-3 = -2x$$

$$\frac{-3}{-2} = x$$

$$x = \frac{3}{2}$$

c)  $y = 2x - 3$

$$y = -2x + 3$$

$$2x - 3 = -2x + 3$$

$$2x - 3 + 3 = -2x + 3 + 3$$

$$\frac{2x}{2} = \frac{6}{2}$$

$$x = 3$$

when  $x = 3$

$$y = -2(3) - 3$$

$$y = -6 - 3$$

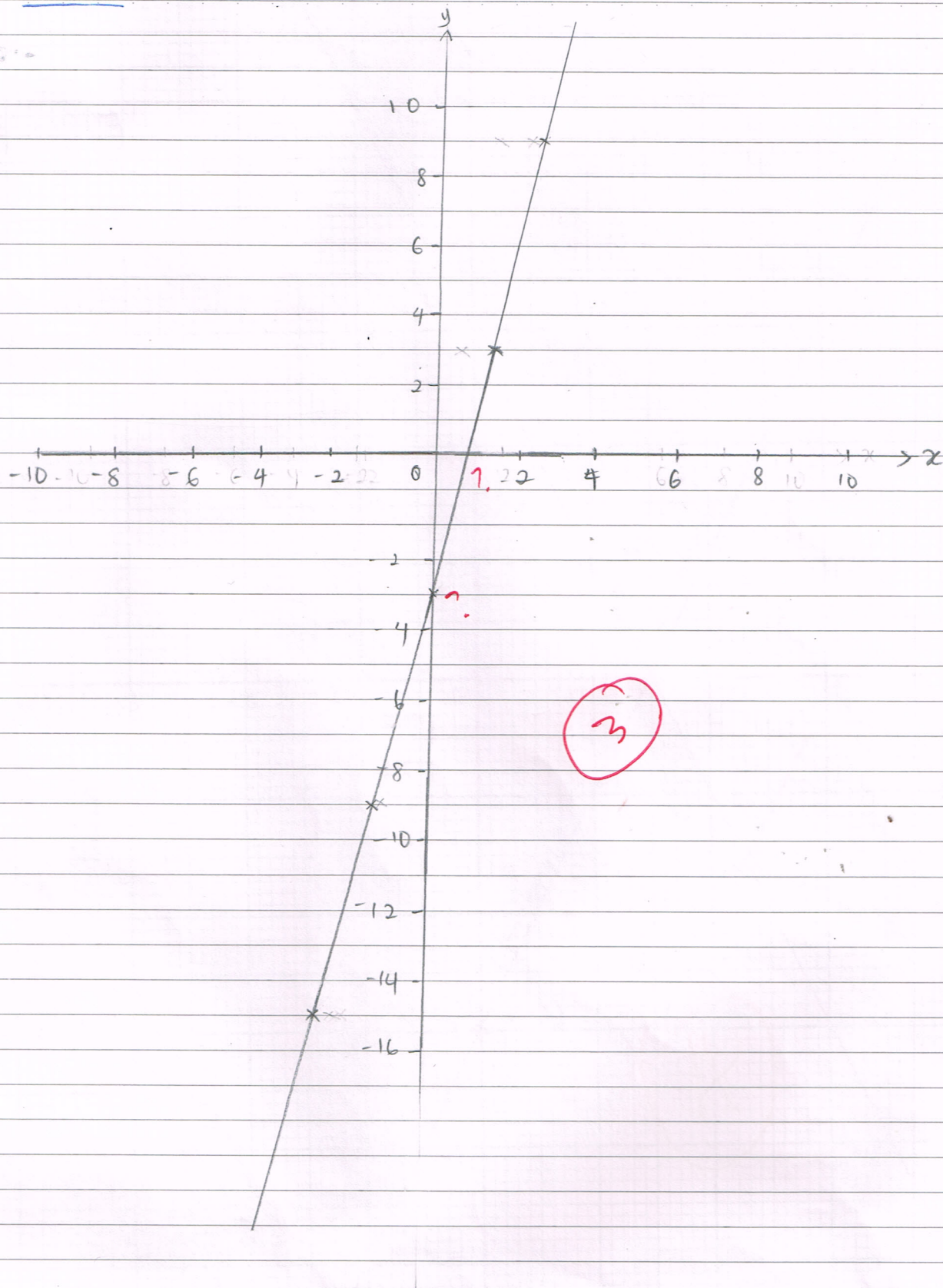
$$y = -9$$

50



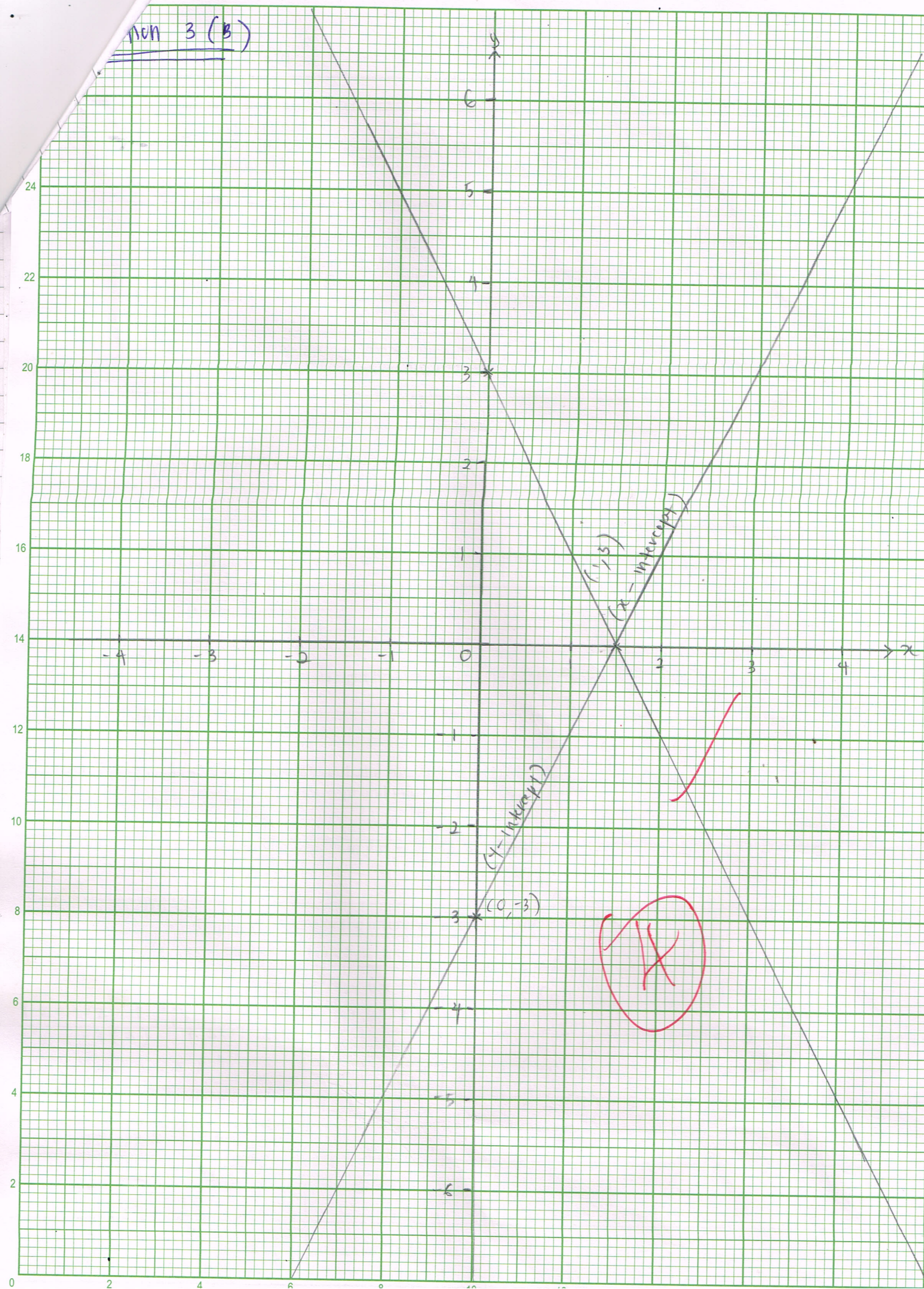
Question 2

b)

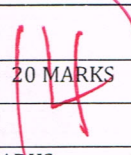




men 3 (B)





|                                                                                                                         |                         |                                                                                   |          |                             |            |                                  |                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------|-----------------------------------------------------------------------------------|----------|-----------------------------|------------|----------------------------------|-------------------------------------------------------------------------------------|
|  KEMENTERIA/<br>PENDIDIKAN<br>MALAYSIA |                         |  |          | COURSE CODE/<br>COURSE NAME |            | PBM1035 INTENSIVE<br>MATHEMATICS |                                                                                     |
|                                                                                                                         |                         |                                                                                   |          | COURSEWORK<br>ASSESSMENT    |            | END OF CHAPTER 2                 |                                                                                     |
|                                                                                                                         |                         |                                                                                   |          | SESSION                     |            | DECEMBER 2018                    |                                                                                     |
|                                                                                                                         |                         |                                                                                   |          | DURATION                    | 60<br>MINS | CLO1                             |  |
| NAME                                                                                                                    | Bronica Bida Ak chunday | CLO2                                                                              | 20 MARKS |                             |            |                                  |                                                                                     |
| REGISTRATION NO.                                                                                                        | 051PP18F2003            | CLO3                                                                              |          |                             |            |                                  |                                                                                     |
| PROGRAMME/ SECTION                                                                                                      |                         | IPP1                                                                              |          | TOTAL MARKS                 |            | 20 MARKS                         |                                                                                     |

#### Instructions

- Answer ALL questions. Write your answers in the spaces provided.
- Show your working to get marks. You may use a non-programmable scientific calculator.

#### Question 1

CLO1, C2

[2 marks]

Given a function  $f(x) = -3x^2 + 2x + 4$ , identify  $f(-5)$  and  $f(0)$ .

#### Question 2

CLO1, C2

[5 marks]

- (a) Complete the following table for the function of a straight line  $y = 6x - 3$  for range  $-2 \leq x \leq 2$ .

|     |    |    |   |   |   |
|-----|----|----|---|---|---|
| $x$ | -2 | -1 | 0 | 1 | 2 |
| $y$ |    |    |   |   |   |

CLO1, C3

[4 marks]

- (b) Plot the graph of straight line  $y = 6x - 3$  for range  $-2 \leq x \leq 2$ .

#### Question 3

CLO1, C2

[3 marks]

Given the straight line AB with the equation of  $y = 2x - 3$ .

- (a) Identify the y-intercept and x-intercept.

CLO1, C3

[4 marks]

- (b) Given another equation  $y = -2x + 3$ . Draw the graph of both lines on the same graph paper.

CLO1, C3

[2 marks]

- (c) Graphically, identify the intersection point of these two lines.



## Question 1

$f(x) = -3x^2 + 2x + 4$  identify  $f(-5)$  and  $f(0)$

$f(-5)$

$$\begin{aligned} f(-5) &= -3(-5)^2 + 2(-5) + 4 \\ &= -75 - 10 + 4 \\ &= -81 \end{aligned}$$

$f(0)$

$$\begin{aligned} f(0) &= -3(0)^2 + 2(0) + 4 \\ &= 0 + 0 + 4 \\ &= 4 \end{aligned}$$

## Question 2

|   |     |    |    |   |   |
|---|-----|----|----|---|---|
| x | -2  | -1 | 0  | 1 | 2 |
| y | -15 | -9 | -3 | 3 | 9 |

steps -  $2\frac{1}{2}$

## Question 3

a  $y = 2x - 3$

identify the y-intercept and x-intercept.

Find the y-intercept

when  $x = 0$

$$\begin{aligned} y &= 2(0) - 3 \\ &= 0 - 3 \\ &= -3 \\ (0, -3) \end{aligned}$$

Find x-intercept

when  $y = 0$

$$\begin{aligned} 0 &= 2x - 3 \\ 0 + 3 &= 2x \\ \frac{3}{2} &= \frac{2x}{2} \\ \frac{3}{2} &= x \\ (\frac{3}{2}, 0) \end{aligned}$$



b  $y = -2x + 3$

identify the y-intercept and x-intercept

when  $x = 0$

$$y = -2(0) + 3$$

$$= 0 + 3$$

$$= 3$$

$$(0, 3)$$

when  $y = 0$

$$0 = -2x + 3$$

$$0 - 3 = -2x$$

$$\frac{-3}{-2} = \frac{-2x}{-2}$$

$$\frac{3}{2} = x$$

$$\left(\frac{3}{2}, 0\right)$$

c  $y = 2x - 3$  ①

$y = -2x + 3$  ②

$$\textcircled{1} = \textcircled{2}$$

$$2x - 3 = -2x + 3$$

$$2x + 2x = 3 + 3$$

$$\frac{4x}{4} = \frac{6}{4}$$

$$x = \frac{3}{2}$$

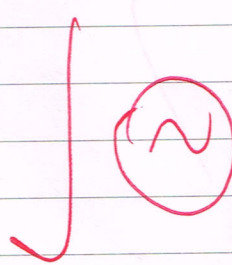
when  $x = \frac{3}{2}$

$$y = -2\left(\frac{3}{2}\right) + 3$$

$$= -3 + 3$$

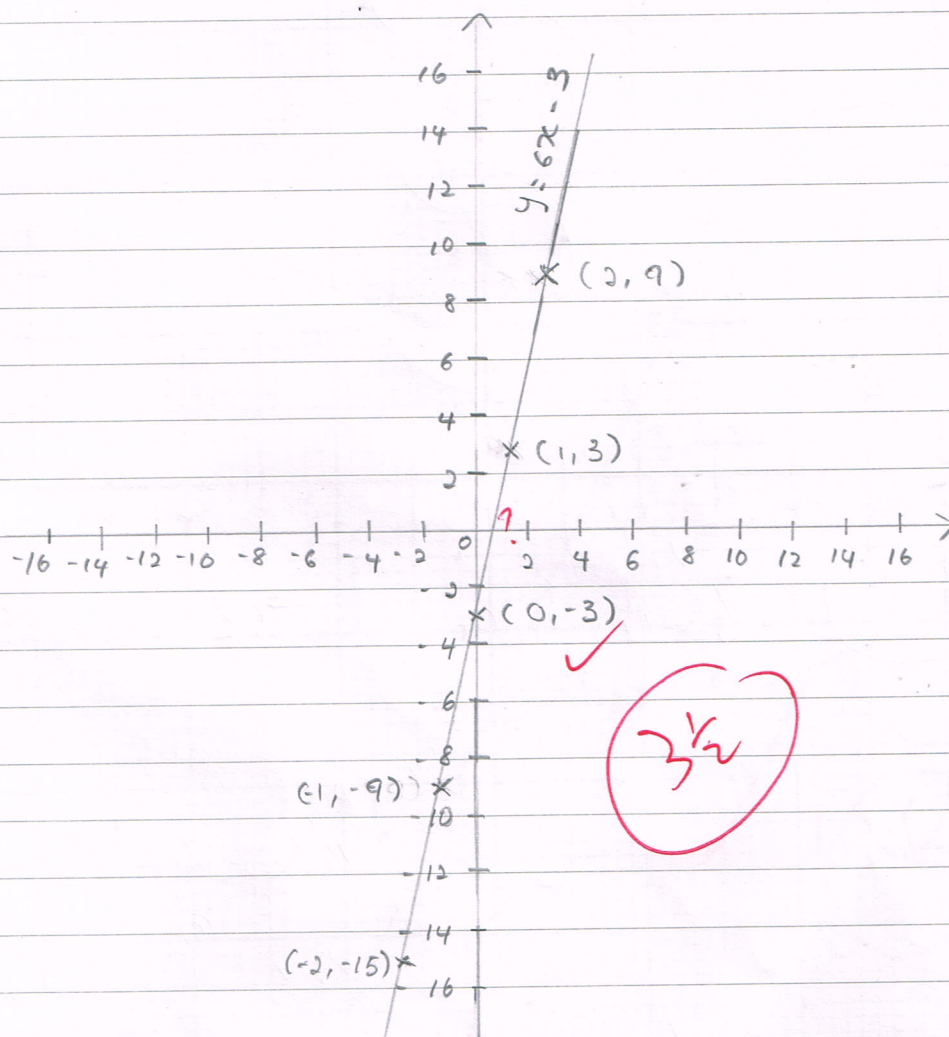
$$= 0$$

intersection point =  $\left(\frac{3}{2}, 0\right)$



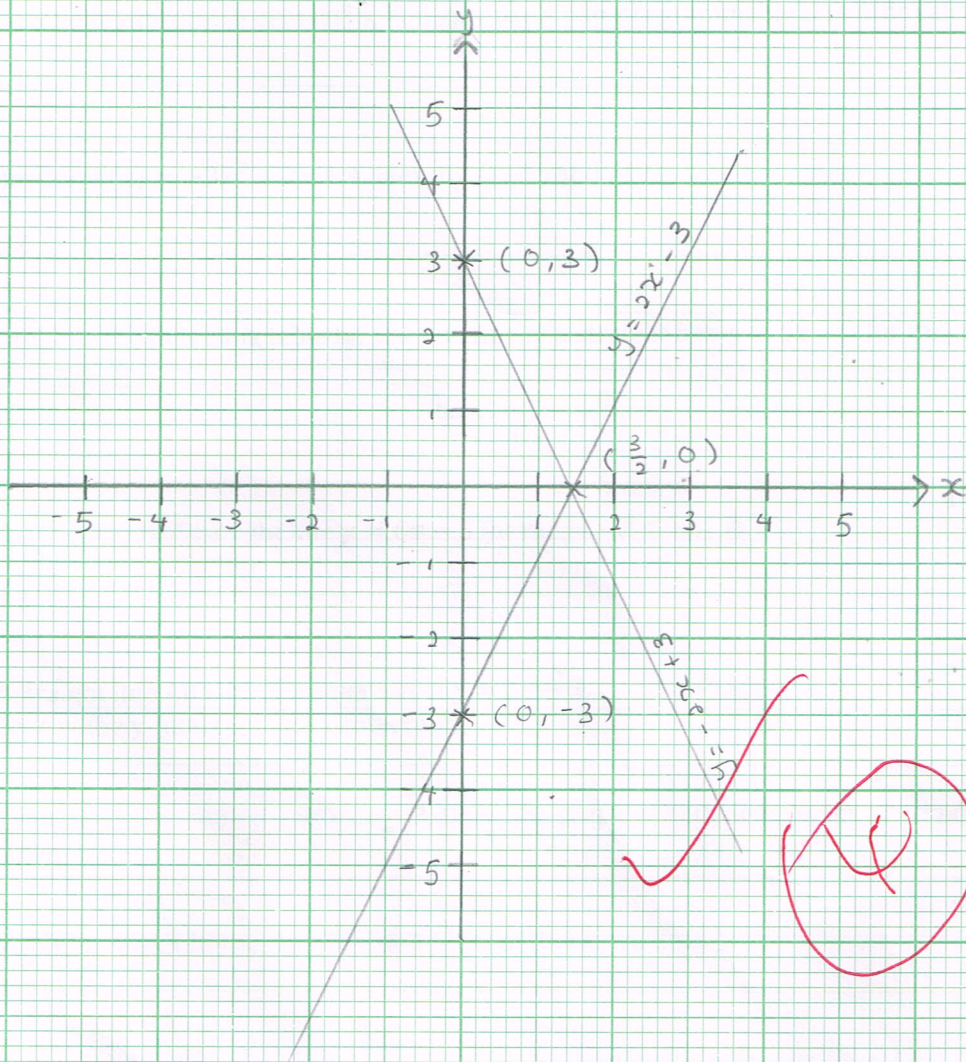


## Question 2 (b)





Question 3 (a, b)





|                                                                                                                                                                                                                                                                                                              |                        |                             |            |                                  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------------|------------|----------------------------------|--|
|  <b>KEMENTERIA/<br/>PENDIDIKAN<br/>MALAYSIA</b><br><br> <b>POLITEKNIK<br/>MALAYSIA</b><br><br><b>JABATAN MATEMATIK, SAINS DAN KOMPUTER</b> |                        | COURSE CODE/<br>COURSE NAME |            | PBM1035 INTENSIVE<br>MATHEMATICS |  |
|                                                                                                                                                                                                                                                                                                              |                        | COURSEWORK<br>ASSESSMENT    |            | END OF CHAPTER 2                 |  |
|                                                                                                                                                                                                                                                                                                              |                        | SESSION                     |            | DECEMBER 2018                    |  |
|                                                                                                                                                                                                                                                                                                              |                        | DURATION                    | 60<br>MINS | CLO1                             |  |
| CLO2                                                                                                                                                                                                                                                                                                         | 20 MARKS               |                             |            |                                  |  |
| CLO3                                                                                                                                                                                                                                                                                                         |                        |                             |            |                                  |  |
| NAME                                                                                                                                                                                                                                                                                                         | Dayang Liyana Syazwani | TOTAL MARKS                 | 20 MARKS   |                                  |  |
| REGISTRATION NO.                                                                                                                                                                                                                                                                                             | 05111818001 Fithi .    |                             |            |                                  |  |
| PROGRAMME/ SECTION                                                                                                                                                                                                                                                                                           | IPP1                   |                             |            |                                  |  |

### Instructions

- Answer ALL questions. Write your answers in the spaces provided.
- Show your working to get marks. You may use a non-programmable scientific calculator.

### Question 1

CL01, C2

[2 marks]

Given a function  $f(x) = -3x^2 + 2x + 4$ , identify  $f(-5)$  and  $f(0)$ .

### Question 2

CL01, C2

[5 marks]

- (a) Complete the following table for the function of a straight line  $y = 6x - 3$  for range  $-2 \leq x \leq 2$ .

|   |     |    |    |   |   |
|---|-----|----|----|---|---|
| x | -2  | -1 | 0  | 1 | 2 |
| y | -15 | -9 | -3 | 3 | 9 |

CL01, C3

[4 marks]

- (b) Plot the graph of straight line  $y = 6x - 3$  for range  $-2 \leq x \leq 2$ .

### Question 3

CL01, C2

[3 marks]

Given the straight line AB with the equation of  $y = 2x - 3$ .

- (a) Identify the y-intercept and x-intercept.

CL01, C3

[4 marks]

- (b) Given another equation  $y = -2x + 3$ . Draw the graph of both lines on the same graph paper.

CL01, C3

[2 marks]

- (c) Graphically, identify the intersection point of these two lines.

### Question 1

$$f(x) = -3x^2 + 2x + 4$$

$$f(-5)$$

$$\begin{aligned}
 &= -3(-5)^2 + 2(-5) + 4 \\
 &= -3(25) - 10 + 4 \\
 &= -75 - 6 \\
 &= -81
 \end{aligned}$$

$$f(0)$$

$$\begin{aligned}
 &= -3(0)^2 + 2(0) + 4 \\
 &= 0 + 0 + 4 \\
 &= 4
 \end{aligned}$$



# Question 2

a)  $y = 6x - 3$

$x = (-2)$

$$= 6(-2) - 3$$

$$= -12 - 3$$

$$= -15$$

$x = (-1)$

$$= 6(-1) - 3$$

$$= -6 - 3$$

$$= -9$$

$x = (-1)$

$$= 6(-1) - 3$$

$$= -6 - 3$$

$$= -9$$

$x = (0)$

$$= 6(0) - 3$$

$$= -3$$

$x = (1)$

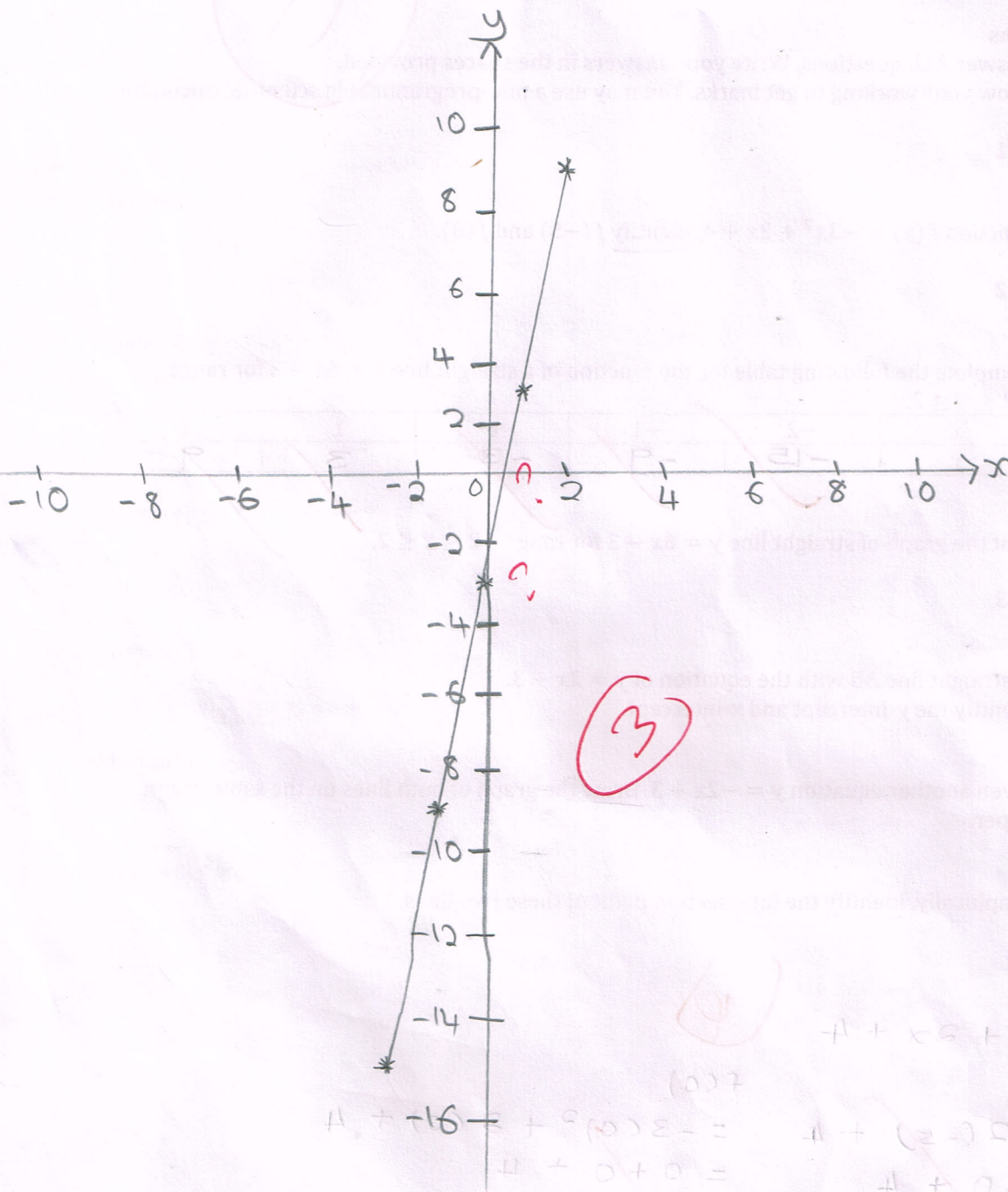
$$= 6(1) - 3$$

$$= 6 - 3$$

$$= 3$$

3

b)



3



## Question 3

a)  $y = 2x - 3$

When  $y = 0$ 

$0 = 2x - 3$

$3 = 2x$

$\frac{3}{2} = x$

$x = \frac{3}{2}$

 $x$  - interceptWhen  $x \neq$ 

$x = 0$

$y = 2(0) - 3$

$y = -3$

 $y$  - intercept

b)  $y = -2x + 3$

$y = 2(0) + 3$

$y = 3$

$0 = -2x + 3$

$-3 = -2x$

$\frac{-3}{-2} = x$

$x = \frac{3}{2}$

c)  $y = 2x - 3$

$y = -2x + 3$

$1 = 2$

$2x - 3 = -2x + 3$

$2x + 2x - 3 = -2x + 2x + 3$

$4x - 3 = 3$

$4x - 3 + 3 = 3 + 3$

$\frac{4x}{4} = \frac{6}{4}$

$x = 1.5$

When  $x = 1.5$ 

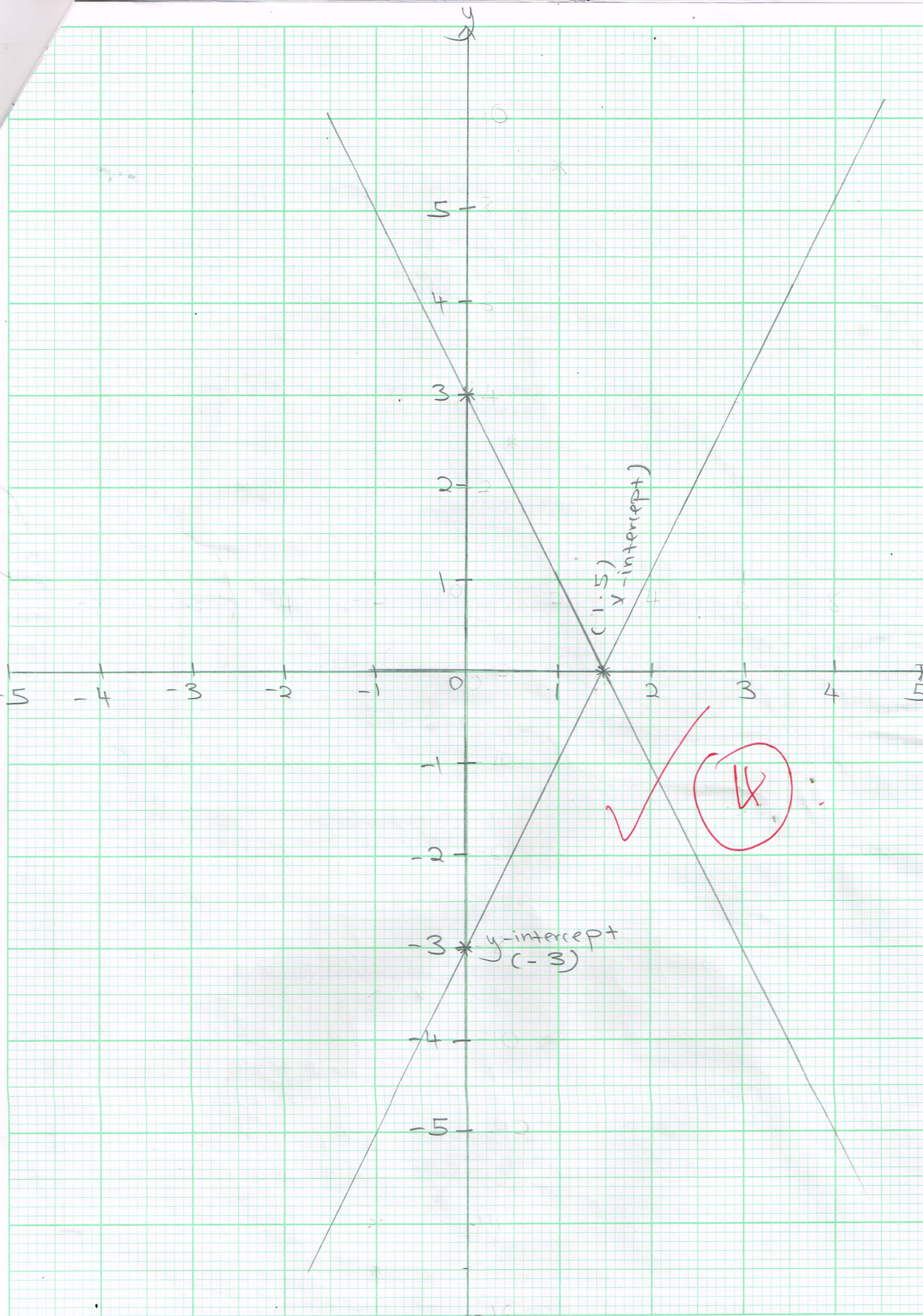
$y = -2(1.5) + 3$

$y = -3 + 3$

$y = 0$

Intersection point  $(1.5, 0)$







|                                                                                                                                   |  |                                                                                   |  |                             |            |                                  |          |
|-----------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------|--|-----------------------------|------------|----------------------------------|----------|
|  <b>KEMENTERIAN/<br/>PENDIDIKAN<br/>MALAYSIA</b> |  |  |  | COURSE CODE/<br>COURSE NAME |            | PBM1035 INTENSIVE<br>MATHEMATICS |          |
|                                                                                                                                   |  |                                                                                   |  | COURSEWORK<br>ASSESSMENT    |            | END OF CHAPTER 2                 |          |
|                                                                                                                                   |  | <b>JABATAN MATEMATIK, SAINS DAN KOMPUTER</b>                                      |  | SESSION                     |            | DECEMBER 2018                    |          |
|                                                                                                                                   |  |                                                                                   |  | DURATION                    | 60<br>MINS | CLO1                             |          |
| NAME                                                                                                                              |  |                                                                                   |  |                             |            | CLO2                             | 20 MARKS |
| REGISTRATION NO.                                                                                                                  |  |                                                                                   |  |                             |            | CLO3                             |          |
| PROGRAMME/ SECTION                                                                                                                |  |                                                                                   |  | TOTAL MARKS                 |            | 20 MARKS                         |          |

### Instructions

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### Question 1

CLO1, C2

[2 marks]

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### Question 2

CLO1, C2

[5 marks]

- (a) Complete the following table for the function of a straight line  $y = 6x - 3$  for range  $-2 \leq x \leq 2$ .

|   |     |    |    |   |   |
|---|-----|----|----|---|---|
| x | -2  | -1 | 0  | 1 | 2 |
| y | -15 | -9 | -3 | 3 | 9 |

CLO1, C3

[4 marks]

- (b) Plot the graph of straight line  $y = 6x - 3$  for range  $-2 \leq x \leq 2$ .

### Question 3

CLO1, C2

[3 marks]

Given the straight line AB with the equation of  $y = 2x - 3$ .

- (a) Identify the y-intercept and x-intercept.

CLO1, C3

[4 marks]

- (b) Given another equation  $y = -2x + 3$ . Draw the graph of both lines on the same graph paper.

CLO1, C3

[2 marks]

- (c) Graphically, identify the intersection point of these two lines.

Question 1

$$f(x) = -3x^2 + 2x + 4$$

$$f(-5) = -3(-5)(-5) + 2(-5) + 4$$

$$= -3(25) + 2(-5) + 4$$

$$= -3(25) - 10 + 4$$

$$= -81$$

$$f(0) = -3x^2 + 2x + 4$$

$$= -3(0)^2 + 2(0) + 4$$

$$= 4$$

4



## Question 2

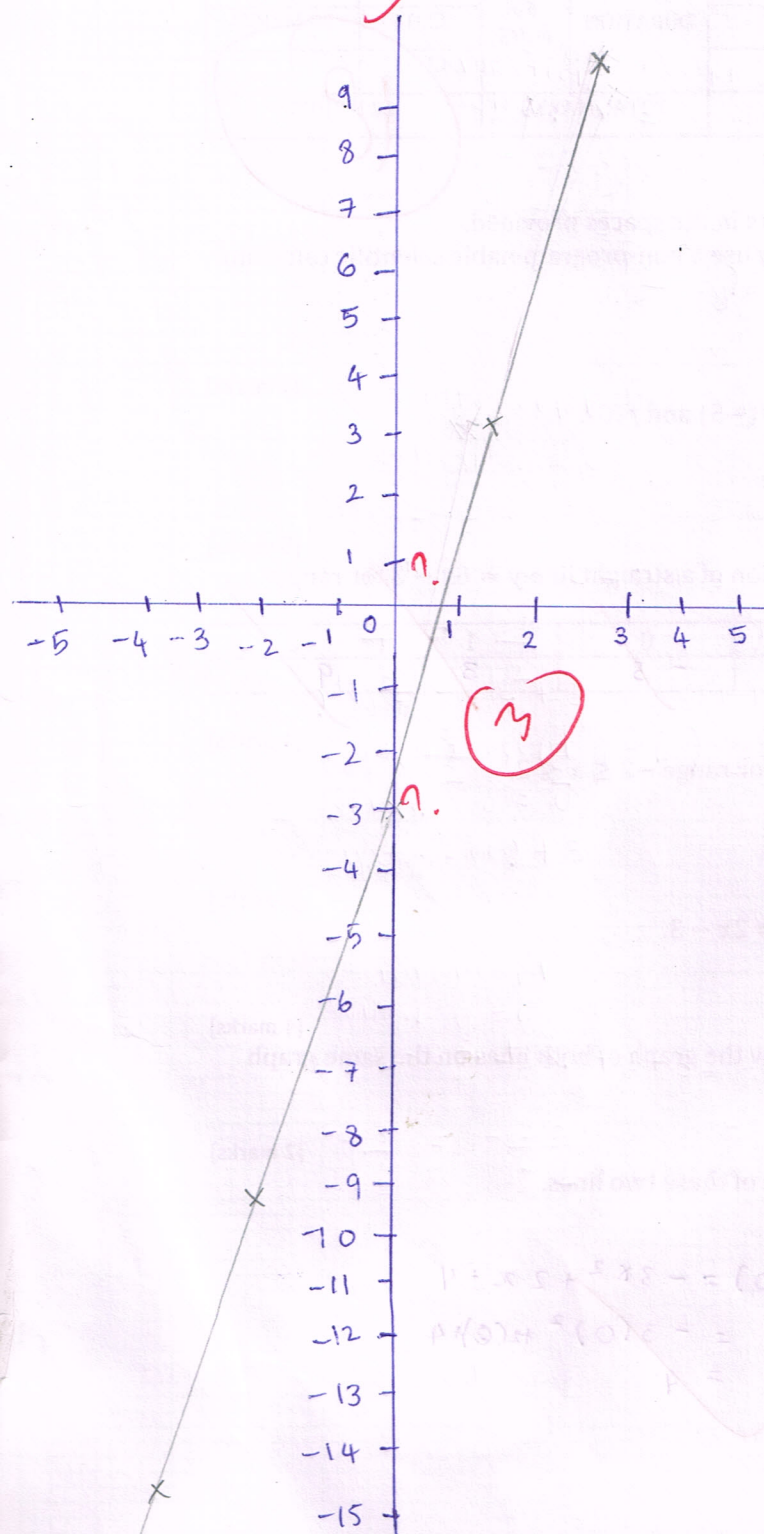
$$y = 6(-2) - 3 = -15$$

$$y = 6(-1) - 3 = -9$$

$$y = 6(0) - 3 = -3$$

$$y = 6(1) - 3 = 3$$

$$y = 6(2) - 3 = 9$$



## Question 3

$$y = 2x - 3$$

y-intercept

when  $x = 0$

$$y = 2(0) - 3$$

$$y = -3$$

x-intercept

when  $y = 0$

$$0 = 2x - 3$$

$$0 + 3 = 2x - 3 + 3$$

$$\frac{3}{2} = \frac{2x}{2}$$

$$x \frac{3}{2} = \frac{2x}{2}$$

$$x \frac{3}{2} = (\frac{3}{2}, -3)$$

$$b) y = -2x + 3$$

y-intercept

when  $x = 0$

$$y = -2(0) + 3$$

$$y = 3$$

x-intercept

when  $y = 0$

$$0 = -2x + 3$$

$$0 - 3 = -2x + 3 - 3$$

$$-\frac{3}{2} = -\frac{2x}{2}$$

$$x = \frac{3}{2}$$

$$(\frac{3}{2}, 3)$$



## Question 3

a)  $y = 2x - 3$   
 $y$  - intercept

when  $x = 0$

$$y = 2(0) - 3$$

$$y = -3$$

$x$  intercept

when  $y = 0$

$$0 = 2x - 3$$

$$0 + 3 = 2x - 3 + 3$$

$$\frac{3}{2} = \frac{2x}{2}$$

$$x = \frac{3}{2}, \left(\frac{3}{2}, -3\right)$$

b)  $y = -2x + 3$

$y$  = intercept

when  $x = 0$

$$y = -2(0) + 3$$

$$y = 3$$

$x$  intercept

when  $y = 0$

$$0 = -2x + 3$$

$$0 - 3 = -2x + 3 - 3$$

$$\frac{-3}{-2} = \frac{-2x}{-2}$$

$$x = \frac{3}{2}$$

$$\left(\frac{3}{2}, 3\right)$$

c)  $y = 2x - 3$

$$y = 2x + 3$$

$$\textcircled{1} = \textcircled{2}$$

$$2x - 3 = -2x + 3$$

$$2x + 2x - 3 = -2x + 2x + 3$$

$$4x - 3 = 3$$

$$4x - 3 + 3 = 3 + 3$$

$$\frac{4x}{4} = \frac{6}{4}$$

$$x = \frac{3}{2} \quad x = 1.5$$

when  $x = \frac{3}{2}$

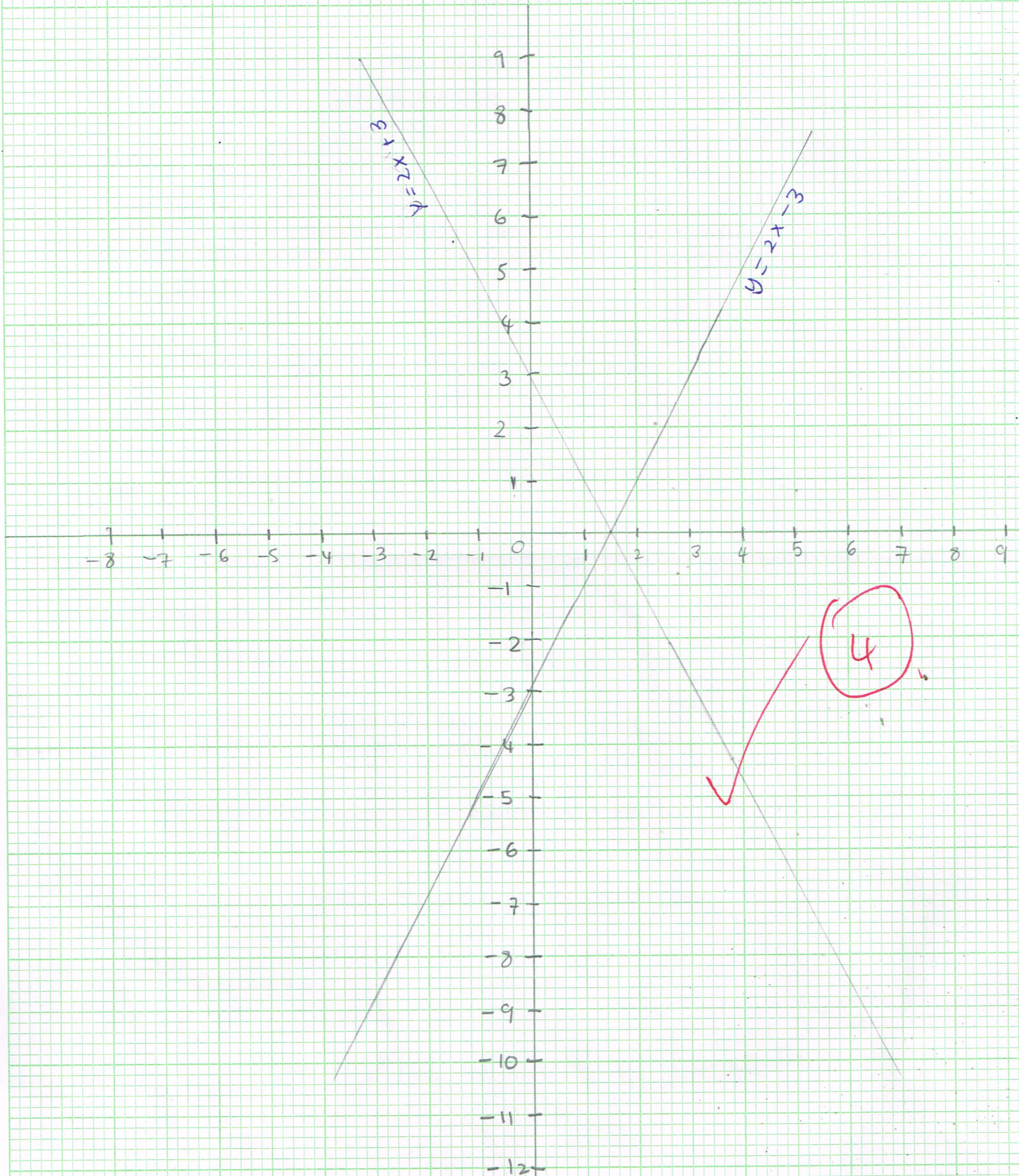
$$y = -2\left(\frac{3}{2}\right) + 3$$

$$y = -3 + 3$$

$$y = 0$$

*Graphically*







|                                                                                                                        |  |                                                                                   |  |                             |            |                                  |    |          |
|------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------|--|-----------------------------|------------|----------------------------------|----|----------|
|  KEMENTERIA<br>PENDIDIKAN<br>MALAYSIA |  |  |  | COURSE CODE/<br>COURSE NAME |            | PBM1035 INTENSIVE<br>MATHEMATICS |    |          |
|                                                                                                                        |  |                                                                                   |  | COURSEWORK<br>ASSESSMENT    |            | END OF CHAPTER 2                 |    |          |
|                                                                                                                        |  |                                                                                   |  | SESSION                     |            | DECEMBER 2018                    |    |          |
| JABATAN MATEMATIK, SAINS DAN KOMPUTER                                                                                  |  |                                                                                   |  | DURATION                    | 60<br>MINS | CLO1                             | 18 |          |
| NAME                                                                                                                   |  | Nurul Natasha Bt Ramze                                                            |  |                             |            | CLO2                             |    | 20 MARKS |
| REGISTRATION NO.                                                                                                       |  | 051PP18F2501                                                                      |  |                             |            | CLO3                             |    |          |
| PROGRAMME/ SECTION                                                                                                     |  | IPP1                                                                              |  | TOTAL MARKS                 |            | 20 MARKS                         |    |          |

#### Instructions

- Answer ALL questions. Write your answers in the spaces provided.
- Show your working to get marks. You may use a non-programmable scientific calculator.

#### Question 1

CL01, C2

[2 marks]

Given a function  $f(x) = -3x^2 + 2x + 4$ , identify  $f(-5)$  and  $f(0)$ .

#### Question 2

CL01, C2

[5 marks]

- (a) Complete the following table for the function of a straight line  $y = 6x - 3$  for range  $-2 \leq x \leq 2$ .

|   |     |    |    |   |   |
|---|-----|----|----|---|---|
| x | -2  | -1 | 0  | 1 | 2 |
| y | -15 | -9 | -3 | 3 | 9 |

CL01, C3

[4 marks]

- (b) Plot the graph of straight line  $y = 6x - 3$  for range  $-2 \leq x \leq 2$ .

#### Question 3

CL01, C2

[3 marks]

Given the straight line AB with the equation of  $y = 2x - 3$ .

- (a) Identify the y-intercept and x-intercept.

CL01, C3

[4 marks]

- (b) Given another equation  $y = -2x + 3$ . Draw the graph of both lines on the same graph paper.

CL01, C3

[2 marks]

- (c) Graphically, identify the intersection point of these two lines.

#### Question 1

$$f(x) = -3x^2 + 2x + 4$$

$$f(-5) = -3(-5)^2 + 2(-5) + 4$$

$$= -75 - 10 + 4$$

$$= -81$$

$$f(0) = -3(0)^2 + 2(0) + 4$$

$$= 0 + 0 + 4$$

$$= 4$$

**4**



## Question 2

$$y = 6x - 3$$

$$x = (-2)$$

$$= 6(-2) - 3$$

$$= -12 - 3$$

$$= -15$$

$$y = 6x - 3$$

$$x = (-1)$$

$$= 6(-1) - 3$$

$$= -6 - 3$$

$$= -9$$

$$y = 6x - 3$$

$$x = (0)$$

$$= 6(0) - 3$$

$$= 0 - 3$$

$$= -3$$

$$y = 6x - 3$$

$$x = (1)$$

$$= 6(1) - 3$$

$$= 6 - 3$$

$$= 3$$

$$y = 6x - 3$$

$$x = (2)$$

$$= 6(2) - 3$$

$$= 12 - 3$$

$$= 9$$

3

## Question 3

$$y = 2x - 3$$

$$\text{when } y = 0$$

$$0 = 2x - 3$$

$$2x - 3 = 0$$

$$\frac{2x}{2} = \frac{3}{2}$$

$$x = 1.5$$

$$(1.5, 0)$$

$$\text{when } x = 0$$

$$y = 2(0) - 3$$

$$y = -3$$

$$(0, -3)$$

$$y = -2x + 3$$

$$\text{when } y = 0$$

$$0 = -2x + 3$$

$$0 - 2x + 3$$

$$-2x + 3 = 0$$

$$\frac{-2x}{-2} = \frac{3}{-2}$$

$$x = -1.5$$

$$(-1.5, 0)$$

$$\text{when } x = 0$$

$$y = -2(0) + 3$$

$$y = 3$$

$$(0, 3)$$

$$y = 2x - 3$$

$$y = -2x + 3$$

$$1 = 2$$

So  
use  
x-intercept  
y-intercept

$$2x - 3 = -2x + 3$$

$$2x + 2x - 3 = -2x + 2x + 3$$

$$4x - 3 = 3$$

$$4x - 3 + 3 = 3 + 3$$

$$\frac{4x}{4} = \frac{6}{4}$$

$$x = 1.5$$

$$\text{when } x = 1.5$$

$$y = -2(1.5) + 3$$

$$y = -3 + 3$$

$$y = 0$$

Intersection point

$$(1.5, 0)$$

2

