KEMENTERIAN PENDIDIKAN MALAYSIA

POLITEKNIK MALAYSIA

JABATAN MATEMATIK, SAINS DAN KOMPUTER

COURSE CODE/ COURSE NAME		PBM1035 INTENSIVE MATHEMATICS			
COURSEWORK ASSESSMENT		TUTORIAL 4			
SESSION		DECEMBER 2018			
DURATION	60 MINS	CLO1			
		CLO2	10 MARKS		
		CLO3			
TOTAL MARKS		10 MARKS			

NAME	Augustine Harrelson
REGISTRATION NO.	081PP18F2025
PROGRAMME/ SECTION	IPP1

8

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

CLO2, C1 [2 marks]

(a) Write a linear equation with the gradient 4 and y-intercept −3.

Question 2

CLO2, C2 [2 marks]

Given two points A(0, −8) and B(−4, 0).

(a) Calculate the distance between A and B.

CLO2, C2 [2 marks]

(b) Calculate the gradient for A and B.

CLO2, C3 [2 marks]

(c) Write the equation for the straight line A and B.

CLO2, C3 [2 marks]

(d) What is the equation of the line perpendicular to the line AB and passing through (4, 0)?

Q1 (a) $y = 4x + (-3)$

$y = 4x - 3$ 2

1½

When $x = 0$

$y = 4(0) - 3$

$y = -3$

$(0, -3)$

When $y = 0$

$0 = 4x - 3$

$3 + 0 = 4x - 3 + 3$

$\frac{3}{4} = \frac{4x}{4}$

$x = \frac{3}{4}$

$(\frac{3}{4}, 0)$

5

Q2 (a) A $(0, -8)$ B $(-4, 0)$

$x_1 \quad y_1 \quad x_2 \quad y_2$

$= \sqrt{(-4-0)^2 + (0-(-8))^2}$

$= \sqrt{(-4)^2 + (8)^2}$

$= \sqrt{16 + 64}$

$= \sqrt{80}$

$= 8.944$ unit

2

(b) $A(\overset{x1}{0}, \overset{y1}{-8})$ and $B(\overset{x2}{-4}, \overset{y2}{0})$

$$m = \frac{y2 - y1}{x2 - x1}$$

$$= \frac{0 - (-8)}{-4 - 0}$$

$$= \frac{8}{-4}$$

$$m = -2$$

(2)

c) $y = mx + c$

$y = -2x + c$

Substitute $B(\overset{x}{-4}, \overset{y}{0})$ into equation

when $x = -4$ $y = 0$

$0 = -2(-4) + c$

$0 = 8 + c$

$0 - 8 = 8 - 8 + c$

$c = -8$

(1)

equation.

d) $y = -2x - 8$

the gradient, $m = -2$

$$m_1 = -\frac{1}{m_2}$$

$$m_2 \times -2 = -\frac{1}{m_2} \times m_2$$

$$\frac{-2m_2}{-2} = \frac{-1}{-2}$$

$$m_2 = \frac{-1}{-2} = \frac{1}{2}$$

$y = \frac{1}{2}x + c$

Substitute $(\overset{x}{4}, \overset{y}{0})$ into equation

$0 = \frac{1}{2}(4) + c$

$0 = 2 + c$

$0 - 2 = 2 - 2 + c$

$c = -2$

(1½)

So, $y = \frac{1}{2}x - 2$

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JABATAN MATEMATIK, SAINS DAN KOMPUTER

NAME	Dayang Hiyana Syazwani	COURSE CODE/ COURSE NAME		PBM1035 INTENSIVE MATHEMATICS	
REGISTRATION NO.	051PP18F2021	COURSEWORK ASSESSMENT		TUTORIAL 4	
PROGRAMME/ SECTION	IPP1	SESSION		DECEMBER 2018	
		DURATION	60 MINS	CLO1	
				CLO2	10 MARKS
				CLO3	
		TOTAL MARKS		10 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

CLO2, C1 [2 marks]

(a) Write a linear equation with the gradient 4 and y-intercept -3.

Question 2

CLO2, C2 [2 marks]

Given two points A$(0, -8)$ and B$(-4, 0)$.

(a) Calculate the distance between A and B.

CLO2, C2 [2 marks]

(b) Calculate the gradient for A and B.

CLO2, C3 [2 marks]

(c) Write the equation for the straight line A and B.

CLO2, C3 [2 marks]

(d) What is the equation of the line perpendicular to the line AB and passing through (4, 0)?

Question 1

$y = 4x + (-3)$

$y = 4x - 3$

2

Question 2

a) A$(0, -8)$ and B$(-4, 0)$

$= \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

$= \sqrt{(-4-0)^2 + (0-(-8))^2}$

$= \sqrt{16 + 64}$

$= \sqrt{80}$

$= 8.94$ unit

2

b) Gradient $M = \frac{y_2 - y_1}{x_2 - x_1}$

$= \frac{0-(-8)}{-4-0}$

$= \frac{8}{-4}$

$= -2$

2

1/2

c) $y = mx + c$

$y = -2x + c$

$-8 = -2(0) + c$

$-8 = c$

$c = -8$

equation 1

d) $y = -2x - 8$, $(4, 0)$

$m_1 = -2$

$m_1 \cdot m_2 = -1$

$\frac{-2 \cdot m_2}{-2} = \frac{-1}{-2}$

$m_2 = \frac{1}{2}$

$y = mx + c$

$0 = \frac{1}{2}(4) + c$

$0 = 2 + c$

$0 - 2 = 2/-2 + c$

$-2 = c$

$c = -2$

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

equation 2

KEMENTERIAN PENDIDIKAN MALAYSIA — POLITEKNIK MALAYSIA		COURSE CODE/ COURSE NAME		PBM1035 INTENSIVE MATHEMATICS	
		COURSEWORK ASSESSMENT		TUTORIAL 4	
		SESSION		DECEMBER 2018	
JABATAN MATEMATIK, SAINS DAN KOMPUTER		DURATION	60 MINS	CLO1	
NAME	hur shamirra			CLO2	10 MARKS
REGISTRATION NO.	051PP18F2030			CLO3	
PROGRAMME/ SECTION	IPP1	TOTAL MARKS		10 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

CLO2, C1 [2 marks]

(a) Write a linear equation with the gradient 4 and y-intercept −3.

Question 2

CLO2, C2 [2 marks]

Given two points A(0, −8) and B(−4, 0).

(a) Calculate the distance between A and B.

CLO2, C2 [2 marks]

(b) Calculate the gradient for A and B.

CLO2, C3 [2 marks]

(c) Write the equation for the straight line A and B.

CLO2, C3 [2 marks]

(d) What is the equation of the line perpendicular to the line AB and passing through (4, 0)?

Q1

a) $y = mx + c$

$y = 4x - 3$ (2)

Q2(a) A (x_1, y_1) and B (x_2, y_2)

$\sqrt{(-4-0)^2 + (0-(-8))^2}$

$\sqrt{(-4)^2 + (8)^2}$

$\sqrt{16+64}$

$\sqrt{80}$ (2)

$= 8.94$ unit

b) A (0, −8) B (−4, 0)

$$m = \frac{0-(-8)}{-4-0}$$

$$= \frac{8}{-4}$$

$$m = -2$$ ✓ (2)

c) $y = mx + c$

$y = -2x + c$

$y = -2(-4) + c$

$0 = 8 + c$

$0 - 8 = 8 - 8 + c$ ✓ (2)

$-8 = c$

$\therefore y = -2x - 8$

d) $y = -2x - 8$

$m_1 = -2$

$m_1 \cdot m_2 = -1$

$$\frac{-2 \cdot m_2}{-2} = \frac{-1}{-2}$$

$$m_2 = \frac{1}{2}$$ ✓

$y = \frac{1}{2}x + c$

$0 = \frac{1}{2}(4) + c$ (1/2)

$0 = 2 + c$

$0 - 2 = 2 - 2 + c$ ✓

$c = -2$

$y = \frac{1}{2}x - 2$ ✓

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