

 KEMENTERIA/ PENDIDIKAN MALAYSIA				COURSE CODE/ COURSE NAME		PBM1035 INTENSIVE MATHEMATICS	
				COURSEWORK ASSESSMENT		TUTORIAL 4	
				SESSION		DECEMBER 2018	
				DURATION	60 MINS	CLO1	
JABATAN MATEMATIK, SAINS DAN KOMPUTER						CLO2	10 MARKS
						CLO3	
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REGISTRATION NO.	051PP18F2011						
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

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

[2 marks]

Question 2

CLO2, C2

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

- (a) Calculate the distance between A and B.

[2 marks]

CLO2, C2

- (b) Calculate the gradient for A and B.

[2 marks]

CLO2, C3

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

[2 marks]

CLO2, C3

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

[2 marks]

Question 1

$$y = mx + c$$

$$y = 4x - 3$$

Question 2

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

$$A(0, -8) \text{ and } B(-4, 0)$$

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

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

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

$$= \sqrt{16 + 64}$$

$$= \sqrt{80}$$

$$= 8.94 \text{ units}$$

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

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

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

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

$$m = -2$$

$$y = -2x + c$$

$$c) y = -2x + c$$

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

$$-8 = c$$

$$c = -8$$

$$y = -2x - 8$$

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

$$m_1 = -2$$

$$m_1 \cdot m_2 = -1$$

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

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

$$y = mx + c$$

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

$$0 = 2 + c$$

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

$$-2 = c$$

$$c = -2$$

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