

Tutorial 4 (Intensive Mathematics)

Question 1

a) Plot the points given and draw a straight line within two points.

b) Find the midpoint.

$$\text{midpoint} = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

$$= \left(\frac{5 + (-8)}{2}, \frac{10 + (-8)}{2} \right)$$

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

$$= (-1.5, 1)$$

c) Find the distance between the points.

$$\text{Distance between the points} = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

$$= \sqrt{(-8 - 5)^2 + (-8 - 10)^2}$$

$$= \sqrt{-13^2 + (-18)^2}$$

$$= \sqrt{-169 + 324}$$

$$= \sqrt{155}$$

$$= 12.4 \text{ unit}$$

Question 2

Construct the point of intersection of the two lines given by graphing.

$$y = -3x + 2$$

$$y = 2x - 3$$

$$y = x + 4$$

a) $y = -3x + 2$

when $y = 0$, $0 = -3x + 2$

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

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

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

$$x = 0.7 \quad (0.7, 0)$$

b) $y = 2x - 3$

when $x = 0$, $y = 2(0) - 3$

$$y = 0 - 3$$

$$y = -3$$

$$(0, -3)$$

when $y = 0$, $0 = 2x - 3$

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

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

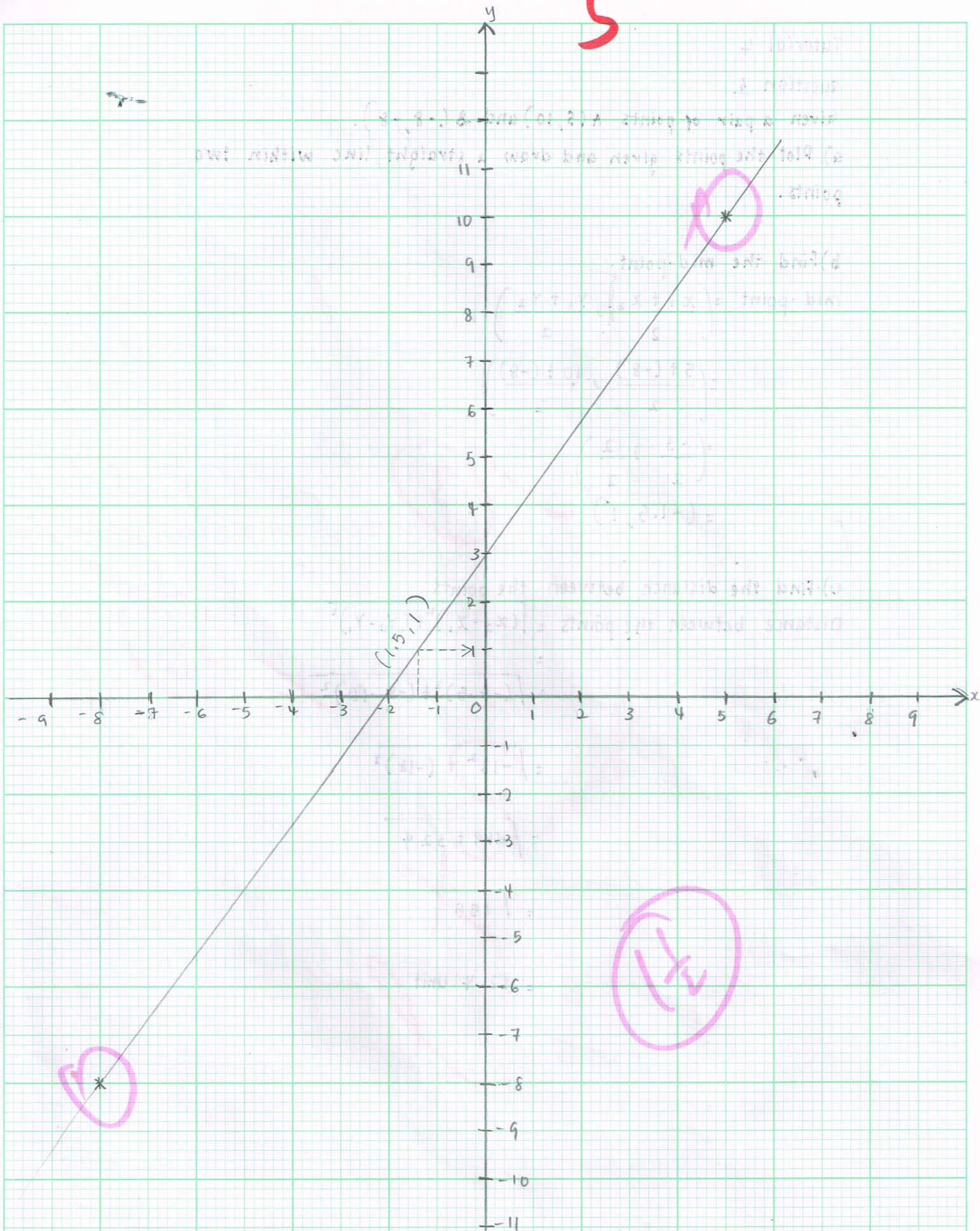
$$x = 1.5$$

$$(1.5, 0)$$

Name : Anna Nuv Syahida
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matrik no: 051PP18F1020

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Tutorial 4

Question 1

Given a pair of points A(5,10) and B(-8,-8).

a) Plot the points given and draw a straight line within two points.

b) Find the mid-point.

$$\begin{aligned}\text{mid-point} &= \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right) \\ &= \left(\frac{5 + (-8)}{2}, \frac{10 + (-8)}{2} \right) \\ &= \left(\frac{-3}{2}, \frac{2}{2} \right) \\ &= (-1.5, 1)\end{aligned}$$

c) Find the distance between the points.

$$\text{Distance between the points} = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

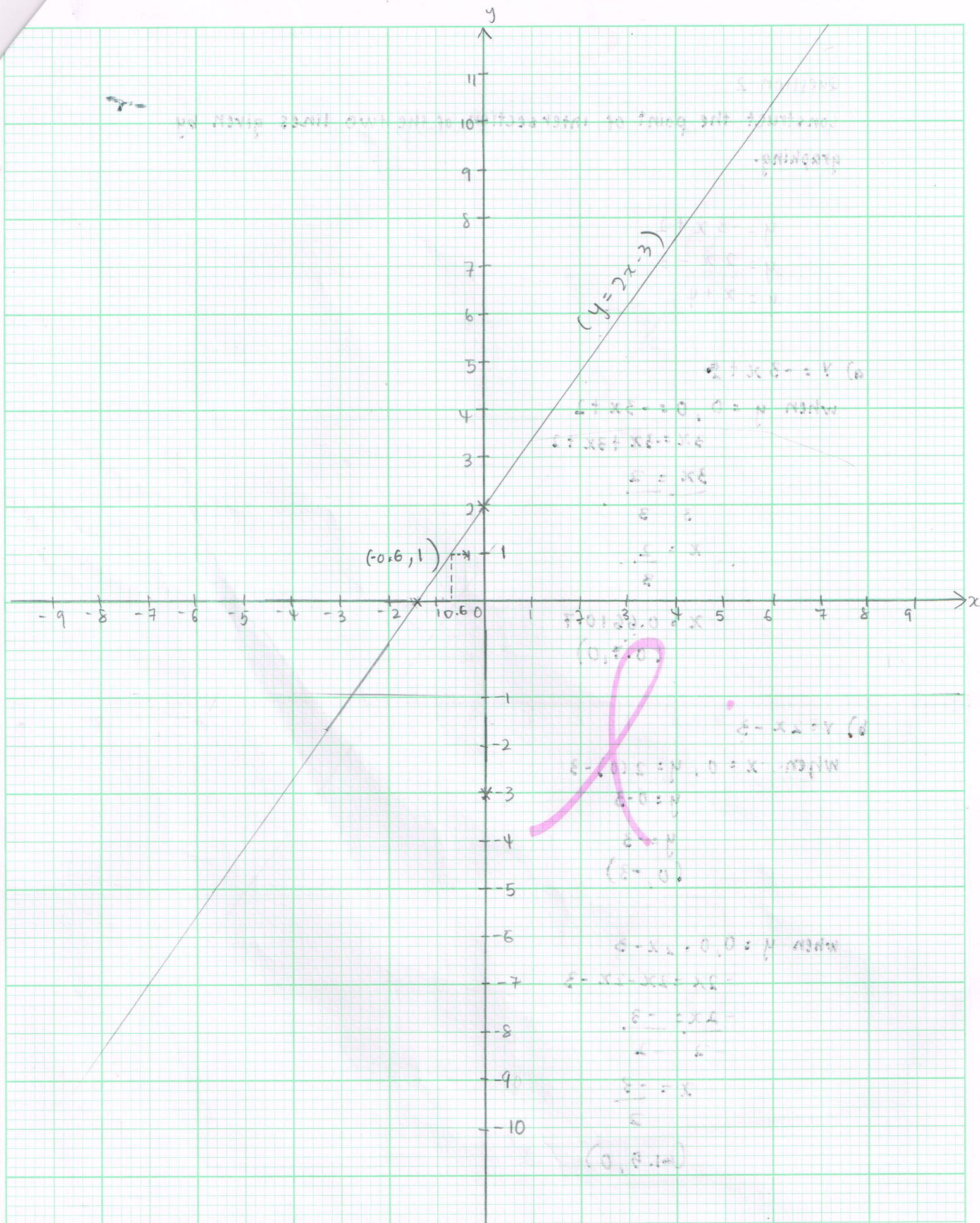
$$= \sqrt{(-8 - 5)^2 + (-8 - 10)^2}$$

$$= \sqrt{-13^2 + (-18)^2}$$

$$= \sqrt{-169 + 324}$$

$$= \sqrt{155}$$

$$= 12.4 \text{ unit}$$



Question 2

Construct the point of intersection of the two lines given by graphing.

$$y = -3x + 2$$

$$y = 2x - 3$$

$$y = x + 4$$

a) $y = -3x + 2$

when $y = 0$, $0 = -3x + 2$

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

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

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

$$x = 0.6610.7$$

$$(0.7, 0)$$

b) $y = 2x - 3$

when $x = 0$, $y = 2(0) - 3$

$$y = 0 - 3$$

$$y = -3$$

$$(0, -3)$$

when $y = 0$, $0 = 2x - 3$

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

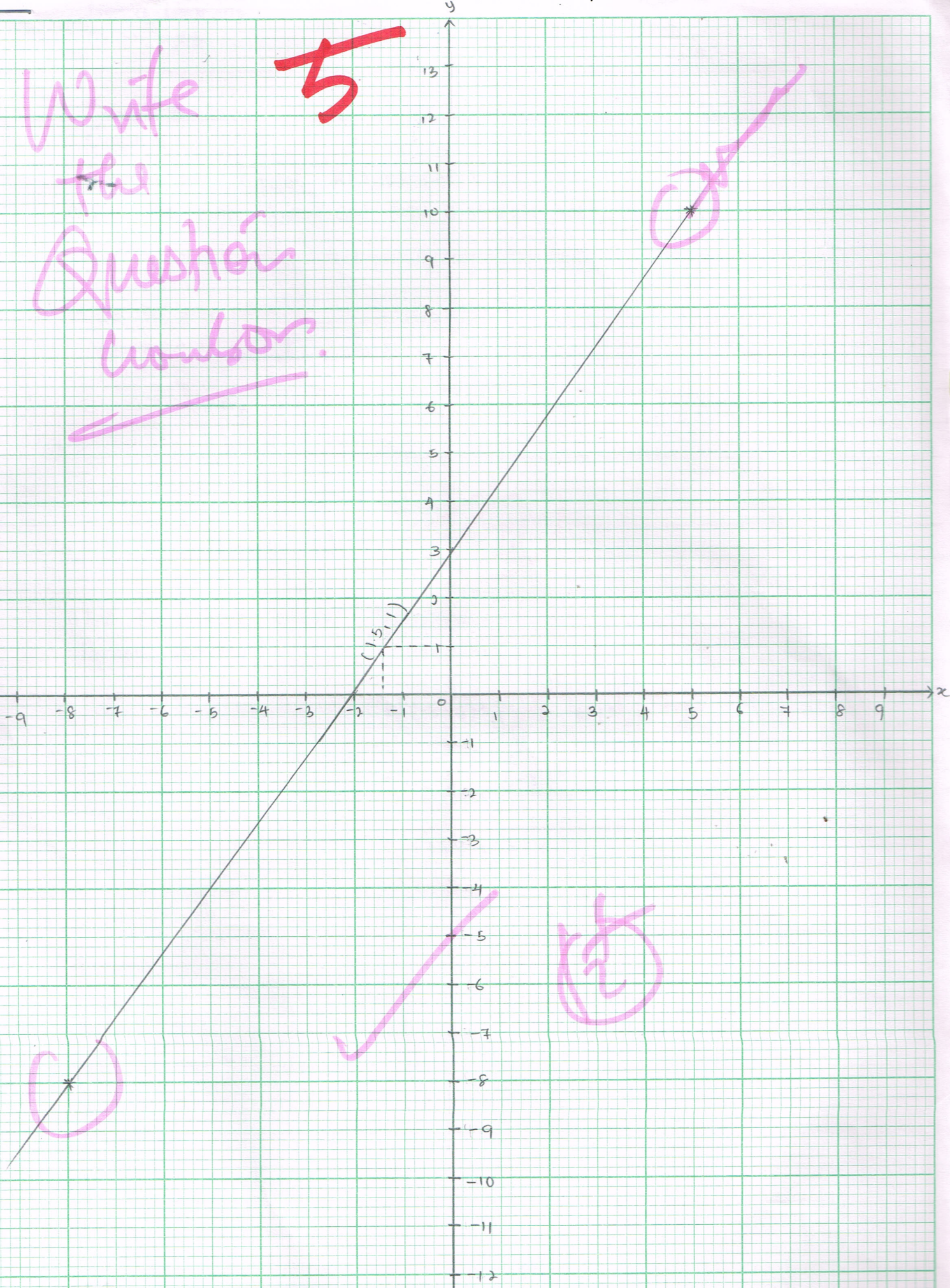
$$\frac{-2x}{-2} = \frac{-3}{-2}$$

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

$$(1.5, 0)$$

Write
the
Equation
number.

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Tutorial

Question 1

Given a pair of points A(5, 10) and B(-8, -8).

a) Plot the points given and draw a straight line within two points.

b) find the mid-point

$$\text{mid-point} = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

$$= \left(\frac{5 + (-8)}{2}, \frac{10 + (-8)}{2} \right)$$

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

$$= (-1.5, 1)$$

c) find the distance between the points.

Distance between the points. $\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

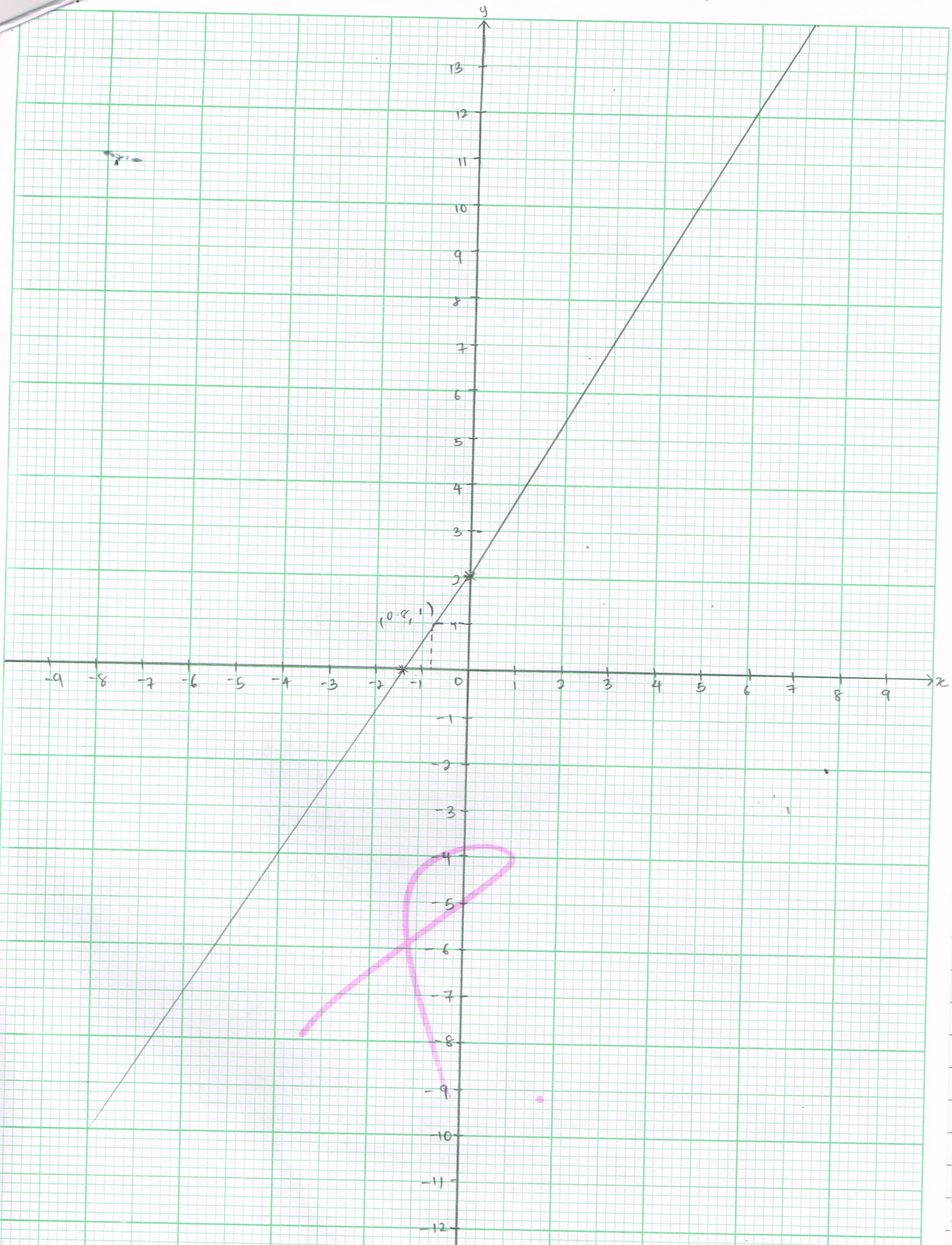
$$= \sqrt{(-8 - 5)^2 + (-8 - 10)^2}$$

$$= \sqrt{-13^2 + (-18)^2}$$

$$= \sqrt{-169 + 324}$$

$$= \sqrt{155}$$

$$= 12.4 \text{ unit}$$



Question 1

Construct the point of intersection of the two lines given by graphing

$$y = -3x + 2$$

$$y = \cancel{2x+3} \quad 2x - 3$$

$$y = x + 4$$

a) $y = -3x + 2$

when $y = 0$, $0 = -3x + 2$

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

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

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

$$x = 0.6610.7$$

$$(0.7, 0)$$

b) $y = 2x - 3$

when $x = 0$, $y = 2(0) - 3$

$$y = 0 - 3$$

$$y = -3$$

$$(0, -3)$$

when $y = 0$, $0 = 2x - 3$

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

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

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

$$(1.5, 0)$$

Tutorial 4

Subject:

Victoria yung (051PP18F1007)

No:

Date:

Question 1

a) Plot the points given and draw a straight line within two points

b) Find the mid-point.

$$\text{mid-point } \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

$$= \left(\frac{5 + (-8)}{2}, \frac{10 + (-8)}{2} \right)$$

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

$$= \left(-\frac{3}{2}, 1 \right)$$

c) Find the distance between the points

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

$$= \sqrt{(5 - (-8))^2 + (10 - (-8))^2}$$

$$= \sqrt{13^2 + 18^2}$$

$$= \sqrt{169 + 324}$$

$$= \sqrt{493}$$

$$= 22.2$$

Question 2

$$y = -3x + 2$$

$$y = 2x - 3$$

$$y = -3x + 2$$

$$(0, 2)$$

$$\text{when } x=0, y = -3(0) + 2$$

$$y = 2$$

$$\text{when } y=0, 0 = -3x + 2$$

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

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

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

Subject:.....

No:.....

Date:

$$y = 2x - 3$$

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

$$y = -3$$

$$(0, -3)$$

When $y=0$ $0 = 2x - 3$

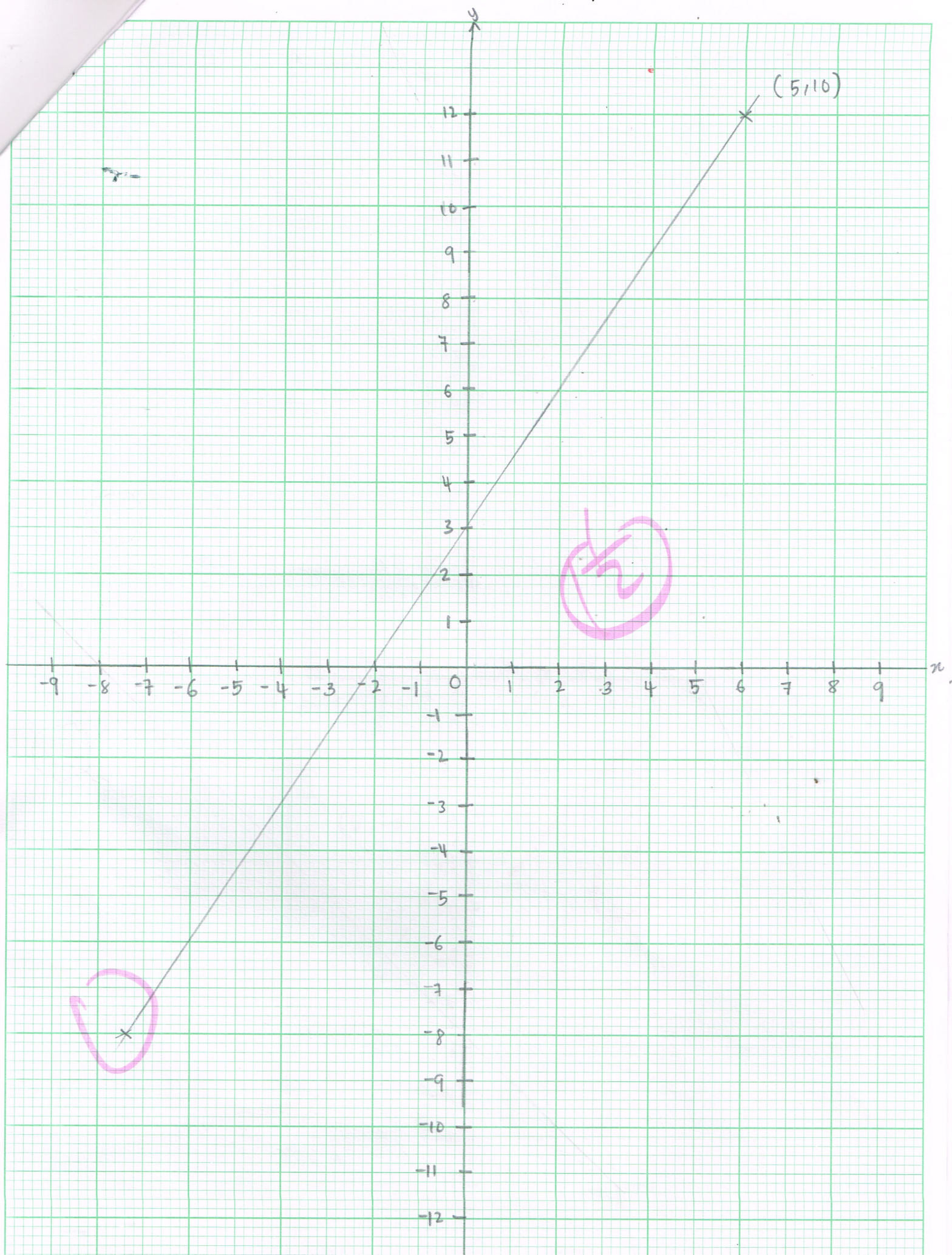
$$3 = 2x - 3 + 2$$

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

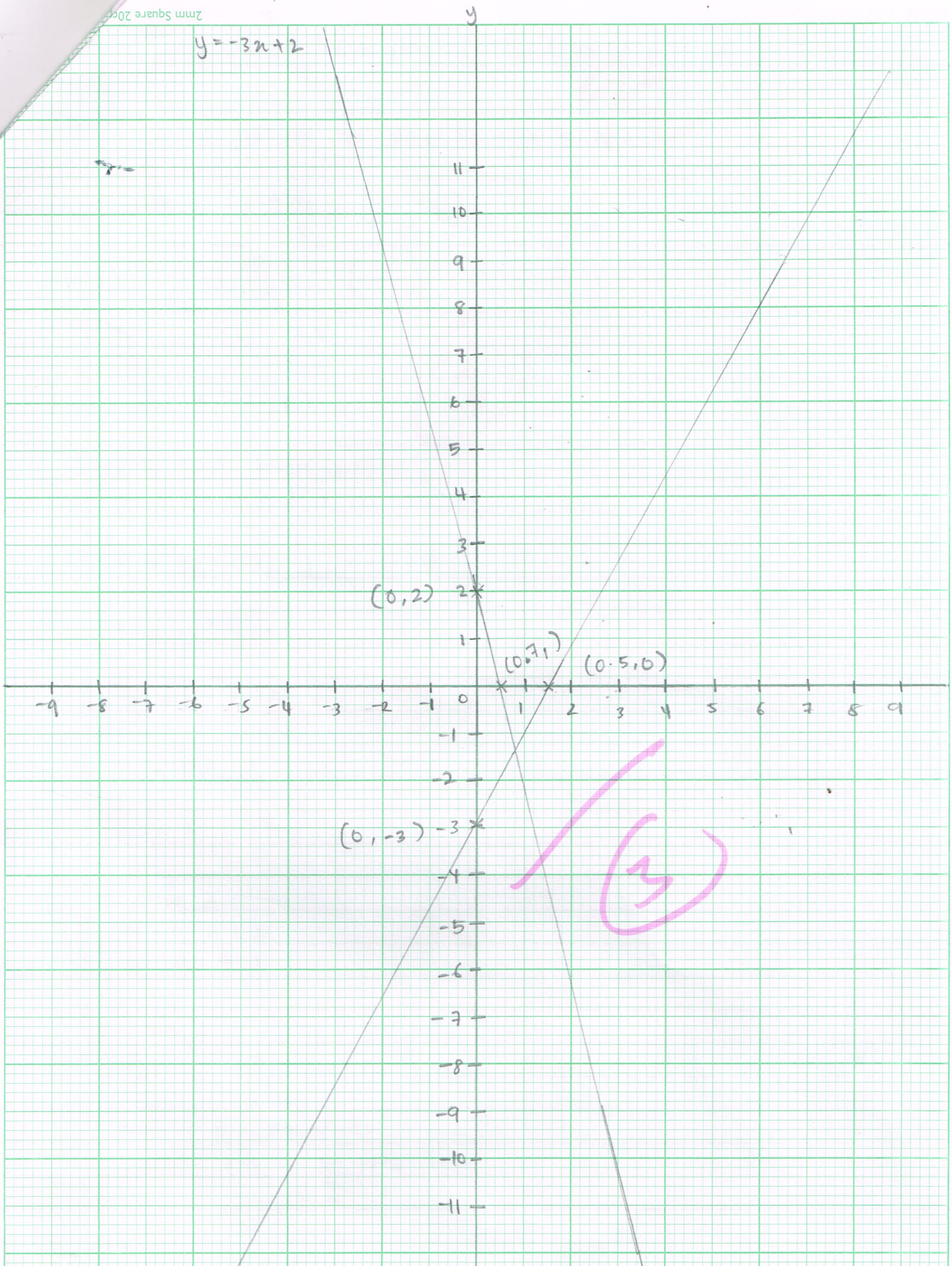
$$x = \frac{3}{2}$$

$$= 1.5$$

$$(1.5, 0)$$



$$y = -3x + 2$$



Tutorial 4

Subject:

No:

Date:

Cherie Lipun (051PP18F1027)

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Question 1

b) Find the mid-point. $x_1 \ y_1 \ x_2 \ y_2$
 $(5, 10) \quad (-8, -8)$

$$\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

$$= \left(\frac{5 + (-8)}{2}, \frac{10 + (-8)}{2} \right)$$

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

$$= (-1.5, 1) "$$

c) Find the distance between the points.

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

$$= \sqrt{(-8 - 5)^2 + (-8 - 10)^2}$$

$$= \sqrt{(-13)^2 + (-18)^2}$$

$$= \sqrt{169 + 324}$$

$$= \sqrt{493}$$

$$= 22.2 \text{ unit} "$$

Question 2

$$y = -3x + 2$$

$$y = 2x - 3$$

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

$$\text{when } x = 0, y = -3(0) + 2$$

$$y = 2$$

$$\text{when } y = 0, 0 = -3x + 2$$

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

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

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

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

$$= 0.7,$$

$$\begin{matrix} x & y \\ (0.7, 0) \end{matrix}$$

$$y = 2x - 3$$

$$\text{when } x = 0, y = 2(0) - 3$$

$$y = -3$$

$$\begin{matrix} x & y \\ (0, -3) \end{matrix}$$

$$\text{when } y = 0, 0 = 2x - 3$$

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

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

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

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

$$= 1.5,$$

$$\begin{matrix} x & y \\ (1.5, 0) \end{matrix}$$

 KEMENTERIAN PENDIDIKAN TINGGI		 POLITEKNIK MALAYSIA KUCHING SARAWAK		COURSE CODE/ COURSE NAME		PBM1035 INTENSIVE MATHEMATICS	
JABATAN MATEMATIK, SAINS DAN KOMPUTER				COURSEWORK ASSESSMENT		TUTORIAL 4	
				SESSION		JUNE 2018	
				DURATION	60 MINS	CLO1	
CLO2		10 MARKS					
CLO3							
TOTAL MARKS		10 MARKS					
NAME							
REGISTRATION NO.							
PROGRAMME/ SECTION		IPP1					

Instructions

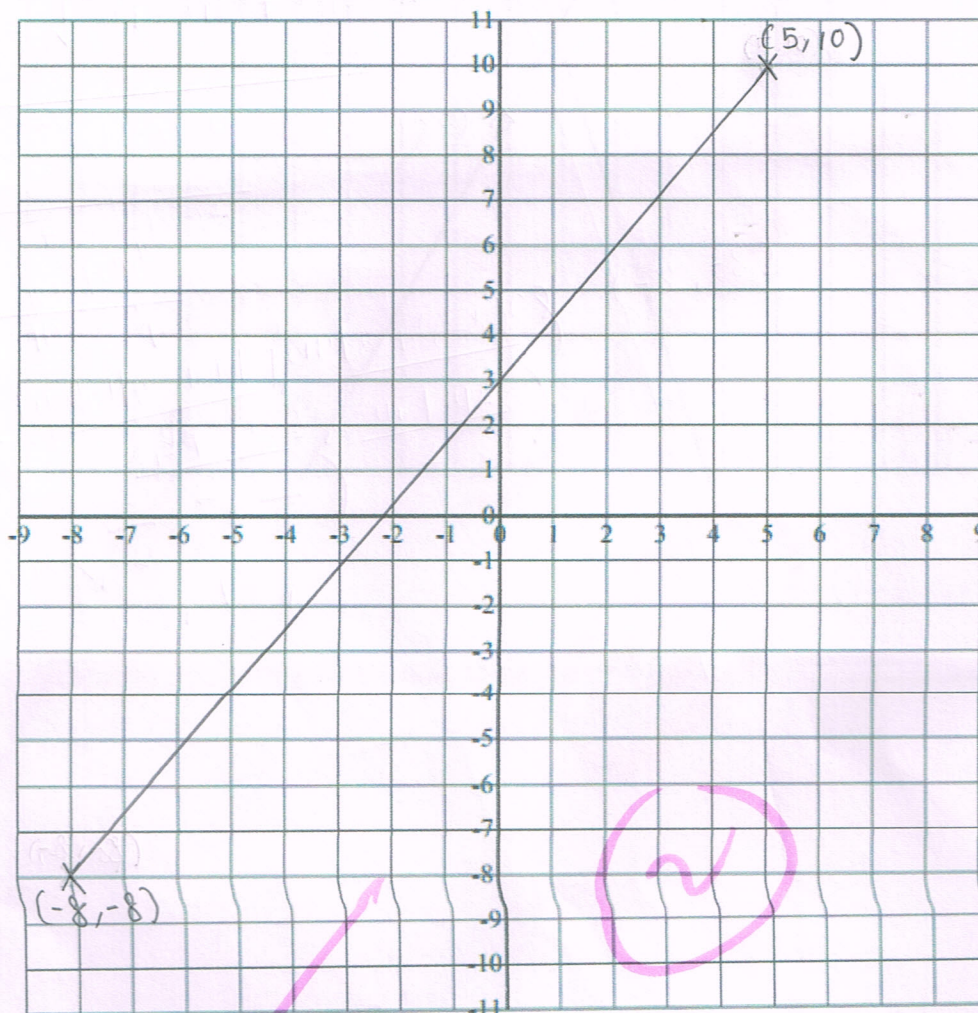
- Answer ALL questions. Write your answers in the spaces provided.
- Show your working to get marks. You may use a non-programmable scientific calculator.

Question 1

Given a pair of points $A(5, 10)$ and $B(-8, -8)$.

- Plot the points given and draw a straight line within two points. [CLO2, C1]
- Find the mid-point. [CLO2, C1]
- Find the distance between the points. [CLO2, C2]

[7 marks]



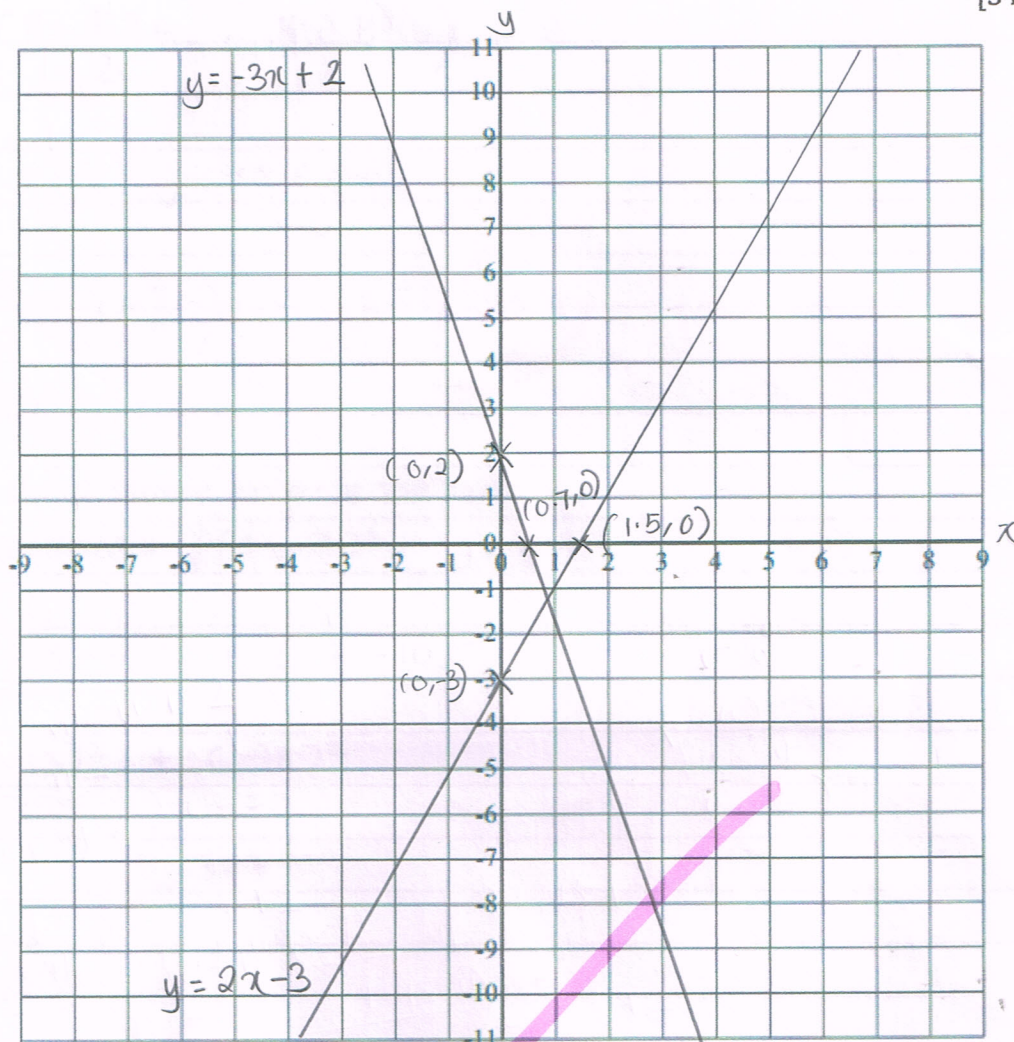
Question 2 [CLO2, C2]

Construct the point of intersection of the two lines given by graphing.

$$y = -3x + 2$$

$$y = 2x - 3$$

[3 marks]



3

9½

Question 1

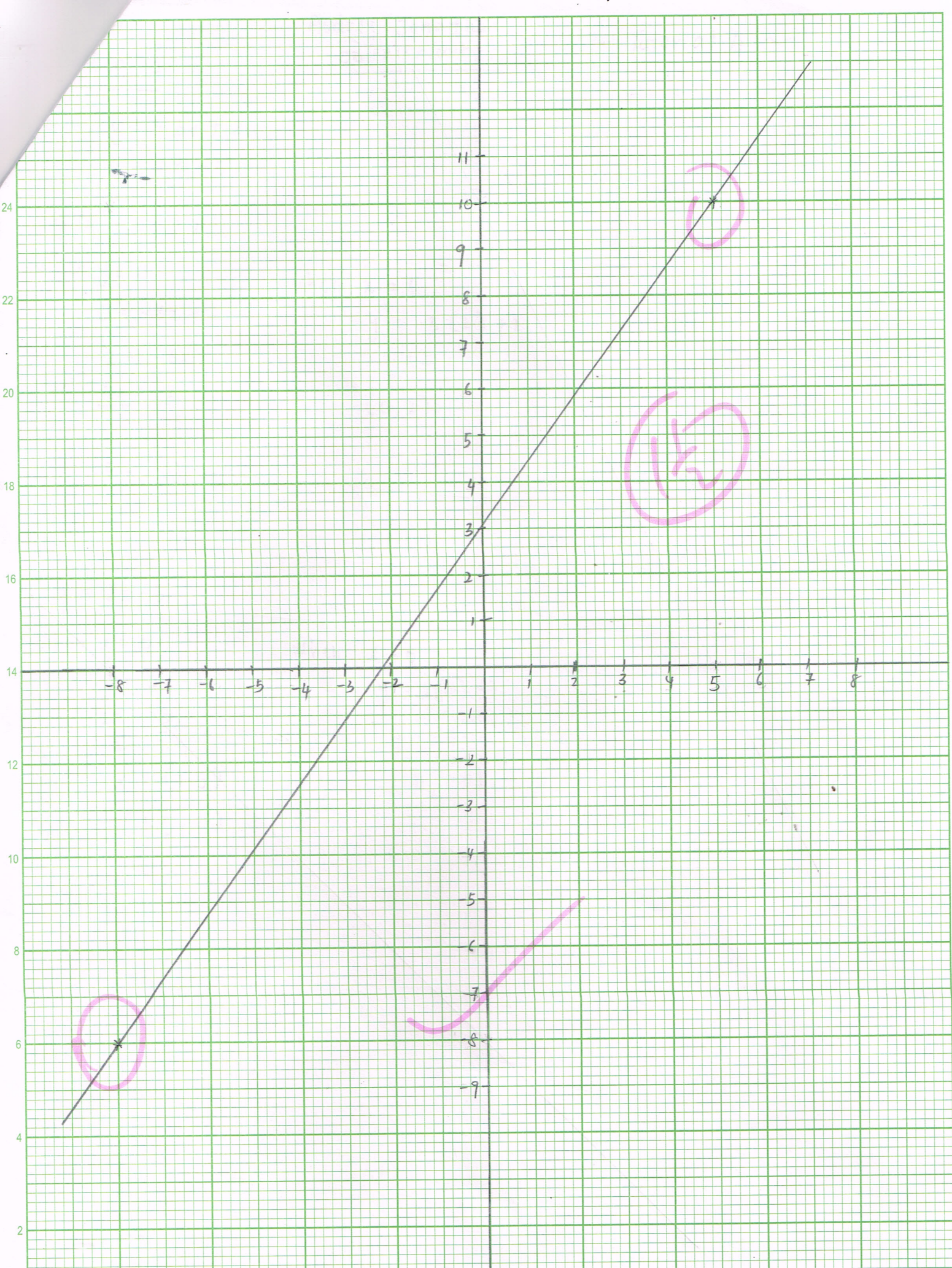
Given a pair of points A(5, 10) and B(-8, -8)

$$\begin{aligned} \text{(b)} \quad & \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right) \\ &= \left(\frac{5 + (-8)}{2}, \frac{10 + (-8)}{2} \right) \\ &= \left(-\frac{3}{2}, 1 \right) \end{aligned}$$

(3)

$$\begin{aligned} \text{(c)} \quad & \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} \\ &= \sqrt{(-8 - 5)^2 + (-8 - 10)^2} \\ &= \sqrt{169 + 324} \\ &= \sqrt{493} = 22.2 \text{ units.} \end{aligned}$$

(2)



tion 2

$$y = -3x + 2$$

$$y = 2x - 3$$

$$y = -3x + 2$$

When $y = 0$

$$0 = -3x + 2$$

$$-2 = -3x$$

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

$$(0.6, 0)$$

When $x = 0$

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

$$y = 2$$

$$(0, 2)$$

$$y = 2x - 3$$

When $y = 0$

$$0 = 2x - 3$$

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

$$x = (1.5)$$

$$(1.5, 0)$$

When $x = 0$

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

$$y = -3$$

$$(0, -3)$$

