

End of Chapter 2.

Question 1

$$(2, -1), y = -\frac{3}{5}x - 2.$$

$$-1 = -\frac{3}{5}(2) + c$$

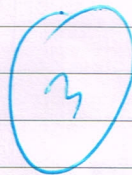
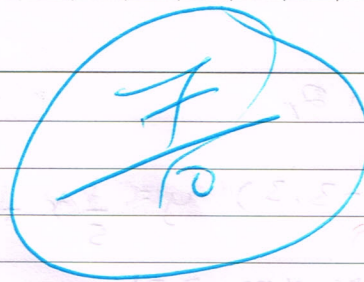
$$-1 = -\frac{6}{5} + c$$

$$-1 + \frac{6}{5} = -\frac{6}{5} + \frac{6}{5} + c$$

$$\frac{1}{5} = c$$

$$c = \frac{1}{5}$$

$$y = -\frac{3}{5}x + \frac{1}{5}$$



Question 2,

$$(-3, 3) \quad y = \frac{1}{5}x + 5$$

$$m_1 \times m_2 = -1$$

$$\frac{1}{5} \times m_2 = -1$$

$$8 \times \frac{1}{8} \times m_2 = -1 \times 5$$

$$\frac{x \times m_2}{x} = \frac{-5}{1}$$

$$m_2 = -5$$

$$\frac{1}{5} \times (-5) = -1$$

Equation 1 and 2 are perpendicular to each other.

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Question 3.

①  $y = x + 4$

②  $y = 2x + 1$

①  $y = 2x + 1$

when  $x = 0$

$y = 0 + 4$

$y = 4$

$(0, 4)$

when  $x = 0$

$y = 2(0) + 1$

$y = 0 + 1$

$y = 1$

$(0, 1)$

when  $y = 0$

$0 = x + 4$

$0 - x = x - x + 4$

$-x = 4$

$-1 \quad -1$

$x = -4$

$(-4, 0)$

when  $y = 0$

$0 = 2x + 1$

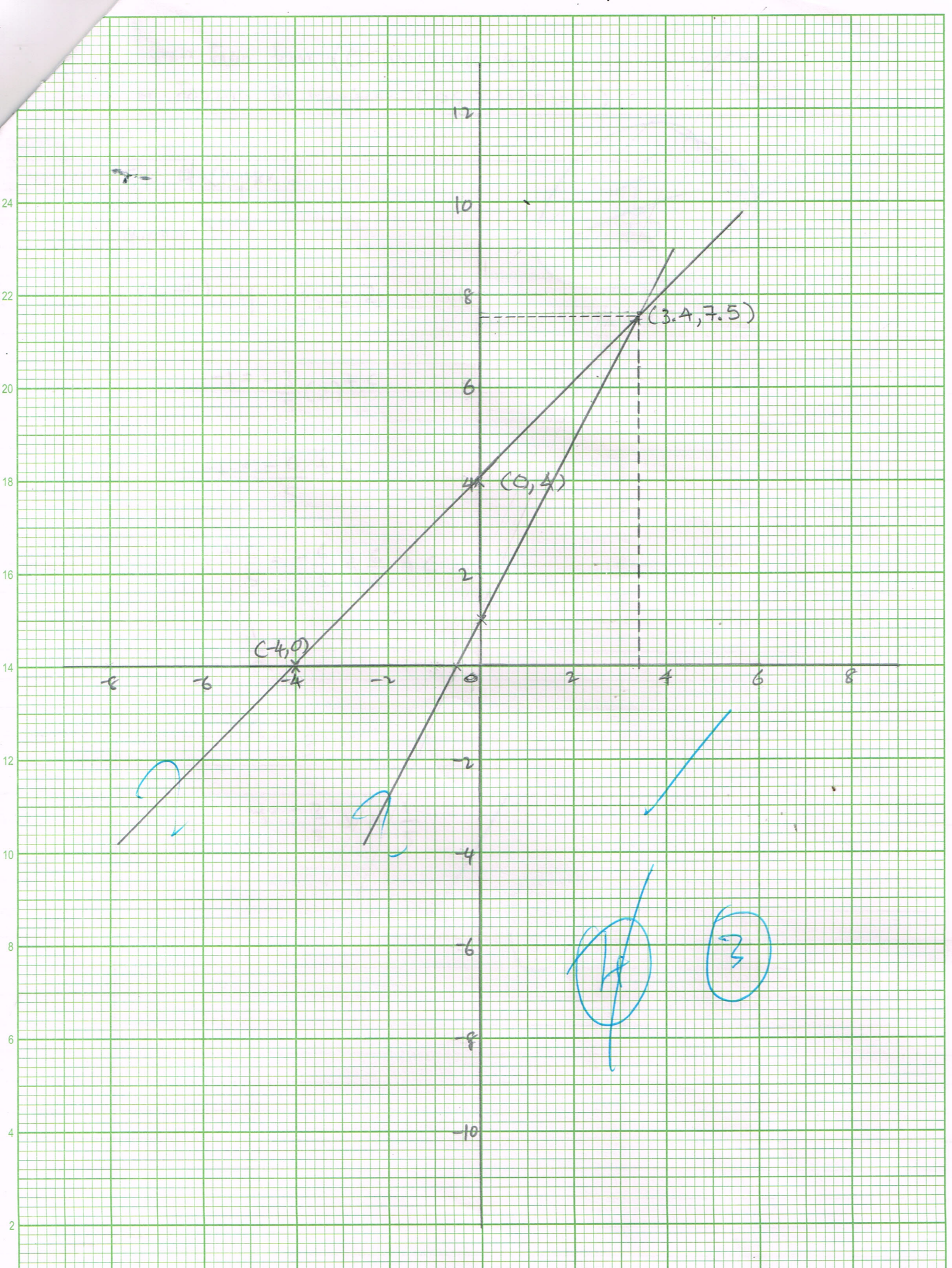
$0 - 2x = 2x - 2x + 1$

$-2x = 1$

$-2 \quad -2$

$x = -0.5$

$(-0.5, 0)$



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Program/Section: IPP1

Coursework Assessment: End of Chapter 2

Course Name: PBM 1035 Intensive Mathematics

### Question 1

In each case, ✓ of the line that passes through the given point and is parallel to the given line.  
Write an equation,

$$(2, -1), y = -\frac{3}{5}x - 2$$

$$x \quad y \quad y = m_1 x + c$$

$$m = -\frac{3}{5}$$

$$y = -\frac{3}{5}x + c$$

$$-1 = -\frac{3}{5}(2) + c$$

$$-1 = -\frac{6}{5} + c$$

$$-1 + \frac{6}{5} = -\frac{6}{5} + \frac{6}{5} + c$$

$$(-\frac{5}{5} + \frac{6}{5}) = c$$

$$\frac{1}{5} = c$$

$$\therefore y = -\frac{3}{5}x + \frac{1}{5}$$

### Question 2

Write an equation of the line that passes through the given point and is perpendicular to the given line.

$$(-3, 3), y = \frac{1}{5}x + 5$$

$$x \quad y$$

$$y = mx + c$$

$$y = \frac{1}{5}x + 5$$

$$m = \frac{1}{5}$$

$$y = \frac{1}{5}x + c$$

$$3 = \frac{1}{5}(-3) + c$$

$$3 =$$

$$(-3, 3), y = \frac{1}{5}x + 5$$

$$y = m_1 x + c$$

$$y = \frac{1}{5}x + 5$$

$$m_1 = \frac{1}{5}$$

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

$$\frac{1}{5} = -\frac{1}{m_2}$$

$$\therefore m_2 = -\frac{1}{5}$$

$$y = -\frac{1}{5}x + c$$

$$3 = -\frac{1}{5}(-3) + c$$

$$3 = \frac{3}{5} + c$$

$$3 - \frac{3}{5} = \frac{3}{5} - \frac{3}{5} + c$$

$$\frac{1}{5} \cdot m_2 = -1$$

$$m_2 = -1 \times 5$$

$$= -5$$

$$m_1 \cdot m_2 = -1$$

$$(\frac{1}{5}) \cdot m_2 = -1$$

$$5 \times \frac{1}{5} \cdot m_2 = -1 \times 5$$

$$m_2 = -5$$

# End of Chapter 2

No:.....

Subject:.....

Date:.....

Cherie Lipun (051PP18F1027)

Winnie Kedoh (051PP18F1017)

Question 1

$$(\underset{x}{2}, \underset{y}{-1}), y = -\frac{3}{5}x - 2$$

$$y = -\frac{3}{5}x - 2$$
$$y = mx + c$$
$$m = -\frac{3}{5}$$

$$m_1 = m_2$$

$$y = -\frac{3}{5}x + c$$

$$-1 = -\frac{3}{5}(2) + c$$

$$-1 = -\frac{6}{5} + c$$

$$-1 + \frac{6}{5} = -\frac{6}{5} + -\frac{6}{5} + c$$

$$\frac{1}{5} = c$$

$$y = -\frac{3}{5}x + \frac{1}{5}$$

Question 2

$$(\underset{x}{-3}, \underset{y}{3}), y = \frac{1}{5}x + 5$$

$$y = \frac{1}{5}x + 5$$

$$y = mx + c$$

$$m = \frac{1}{5}$$

$$m_1 = m_2$$

$$y = \frac{1}{5}x + c$$

$$3 = \frac{1}{5}(5) + c$$

$$3 = 1 + c$$

$$3 - 1 = 1 - 1 + c$$

$$2 = c$$

## Question 3

$$y = x + 4$$

$$y = 2x + 1$$

$$y = x + 4$$

$$\text{when } x = 0, y = x(0) + 4$$

 $x \quad y$ 

$$y = 4$$

 $(0, 4)$ 

$$\text{when } y = 0, 0 = x + 4$$

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

 $x \quad y$ 

$$-4 = x$$

 $(-4, 0)$ 

$$y = 2x + 1$$

$$\text{when } x = 0, y = 2(0) + 1$$

 $x \quad y$ 

$$y = 1$$

 $(0, 1)$ 

$$\text{when } y = 0, 0 = 2x + 1$$

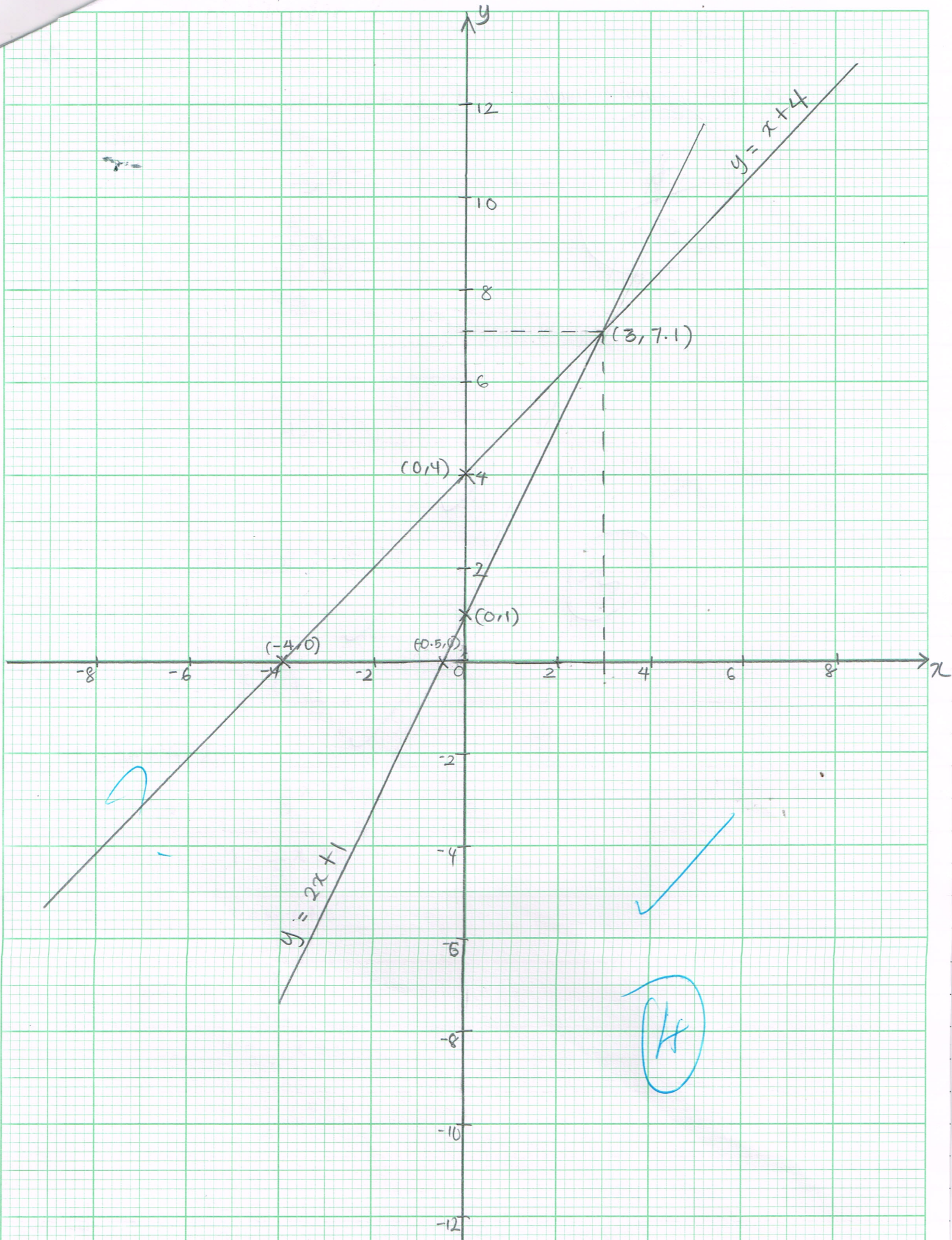
$$0 - 1 = 2x + 1 - 1$$

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

 $x \quad y$ 

$$-0.5 = x$$

 $(-0.5, 0)$



End of chapter 2.

Question 1

$$(2, -1), y = -\frac{3}{5}x - 2$$

$$y = mx + c$$

$$m = -\frac{3}{5}$$

$$-1 = -\frac{3}{5}(2) + c$$

$$-1 = -\frac{6}{5} + c$$

$$c = -\frac{6}{5} + 1$$

$$= -\frac{1}{5}$$

$$y = -\frac{3}{5}x - \frac{1}{5}$$

Question 2

$$(-3, 3), y = \frac{1}{5}x + 5$$

Perpendicular  $m_1 \times m_2 = -1$

$$5 \times \frac{1}{5} \times m_2 = -1 \times 5$$

$$m_2 = -5$$

$$y = mx + c$$

$$3 = -5(-3) + c$$

$$3 = 15 + c$$

$$c = 15 - 3$$

$$= 12$$

$$y = -5x + 12$$

$$m_1 \times m_2 = -1$$

$$\frac{1}{5}x - 5 = -1$$

equation 1 and 2 are perpendicular  
to each other.

## Question 3

$$y = x + 4$$

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

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

$$y = 0 + 4$$

$$0 = x + 4$$

$$y = 4$$

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

$$(0, 4)$$

$$x = -4$$

$$(-4, 0)$$

$$b) y = 2x + 1$$

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

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

$$y = 2(0) + 1$$

$$0 = 2x + 1$$

$$y = 0 + 1$$

$$0 - 1 = 2x + 1 - 1$$

$$= 1$$

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

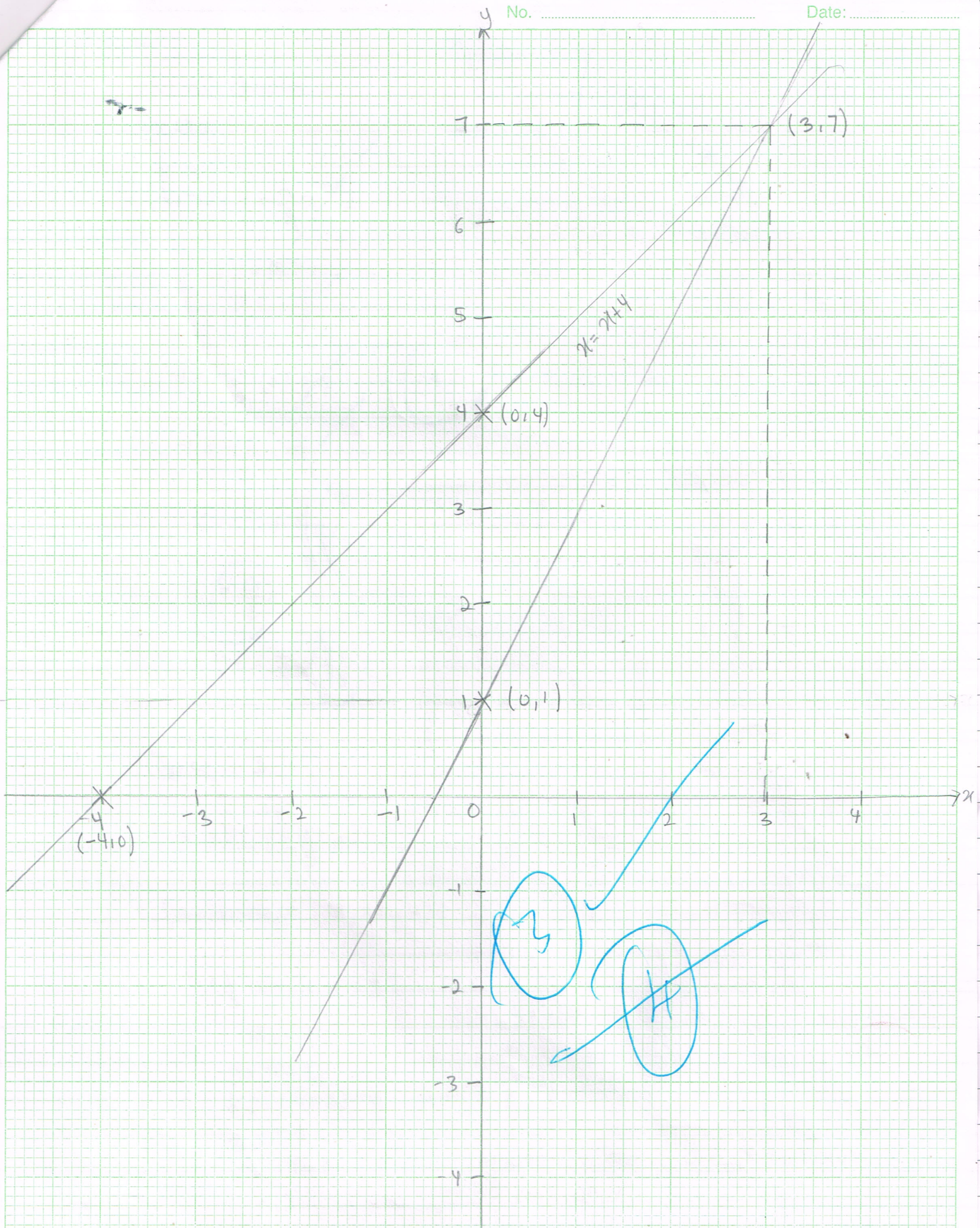
$$(0, 1)$$

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

$$\left(-\frac{1}{2}, 0\right)$$

No. ....

Date: .....



## End of chapter 2

### A) Question 1

$$(2, -1), y = -\frac{3}{5}x - 2$$

$$y = mx + c$$

$$m = -\frac{3}{5}$$

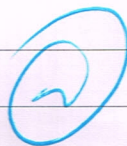
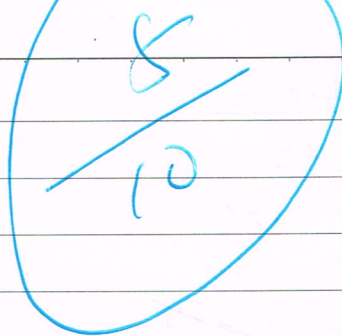
$$-1 = -\frac{3}{5}(2) + c$$

$$-1 = -\frac{6}{5} + c$$

$$c = -\frac{6}{5} + 1$$

$$= -\frac{1}{5}$$

$$= y = -\frac{3}{5}x - \frac{1}{5}$$



### A) Question 2

$$(-3, 3), y = \frac{1}{5}x + 5$$

perpendicular  $m_1 \times m_2 = -1$

$$5 \times \frac{1}{5} \times m_2 = -1 \times 5$$

$$m_2 = -5$$

$$y = mx + c$$

$$3 = -5(-3) + c$$

$$3 = 15 - c$$

$$c = 15 - 3$$

$$= 12$$

$$y = -5x + 12$$

$$m_1 \times m_2 = -1$$

$$\frac{1}{5}x - 5 = -1$$

equation 1 and 2 are perpendicular to each other.



Question 3

a)  $y = x + 4$

when  $x = 0$

when  $y = 0$

$y = 0 + 4$

$0 = x + 4$

$y = 4$

$0 - 4 = x + 4 - 4$

$(0, 4)$

$x = -4$

$(-4, 0)$

b)  $y = 2x + 1$

when  $y = 0$

when  $y = 0$

$y = 2(0) + 1$

$0 = 2x + 1$

$y = 0 + 1$

$0 - 1 = 2x + 1 - 1$

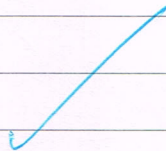
$= 1$

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

$(0, 1)$

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

$(-\frac{1}{2}, 0)$



### Question 1

Write an equation of the line that passes through the given point and is parallel to the given line.

$$(2, -1), y = -\frac{3}{5}x - 2$$

$$y = -\frac{3}{5}x + 5$$

$$\begin{matrix} (2, -1) \\ x \quad y \end{matrix}$$

$$y = mx + 5$$

$$y = -\frac{3}{5}x + 5$$

$$y = mx + c$$

$$y = -\frac{3}{5}x + c$$

$$y = -\frac{3}{5}(2) + c$$

$$-1 = -\frac{3}{5}(2) + c$$

$$-1 = -\frac{6}{5} + c$$

$$-1 + \frac{6}{5} = -\frac{6}{5} + \frac{6}{5} + c$$

$$c = -1 + \frac{6}{5}$$

$$c = -\frac{11}{5}$$

$$y = -\frac{3}{5}x - \frac{11}{5}$$

### Question 2

Write an equation of the line that passes through the given point and is perpendicular to the given line.

$$(-3, 3), y = \frac{1}{5}x + 5$$

$$y = \frac{1}{5}x + 5$$

$$(-3, 3)$$

$$y = \frac{1}{5}x + c$$

$$3 = \frac{1}{5}(-3) + 5$$

$$3 = -\frac{3}{5} + c$$

$$3 + \frac{3}{5} = -\frac{3}{5} + -\frac{3}{5} + c$$

$$c = \frac{12}{5}$$

$$y = \frac{1}{5}x + \frac{12}{5}$$

### Question 3

Graph the equations and find the intersection point of the lines. Label the linear lines and the intersection point correctly.

$$y = x + 4$$

$$y = 2x + 1$$

$$y = x + 4$$

When  $y = 0$

$$0 = x + 4$$

$$x = -4$$

$$(-4, 0)$$

When  $x = 0$

$$y = 0 + 4$$

$$y = 4$$

$$(0, 4)$$

$$y = 2x + 1$$

When  $y = 0$

$$0 = 2x + 1$$

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

$$(-\frac{1}{2}, 0) \quad (-0.5, 0)$$

When  $x = 0$

$$y = 2(0) + 1$$

$$y = 1$$

$$(0, 1)$$

