

Answer all questions directly on the page. Show **ALL** work for full marks.

1. Find the slope of the line passing through each pair of points, be sure to express your answer in lowest terms: (K – 3 marks)

(a) (3,4) and (7,10)

$$m = \frac{10 - 4}{7 - 3}$$

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

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

(b) (4,3) and (4,8)

$$m = \frac{8 - 3}{4 - 4}$$

$$= \frac{5}{0}$$

= undefined
(vertical line)

(c) (5,8) and (-3,8)

$$m = \frac{8 - 8}{-3 - 5}$$

$$= \frac{0}{-8}$$

$$= 0$$

(horizontal line)

2. State the slope **and** y-intercept of each of the following: (K – 11 marks)

(a) $y = -5x + 3$

slope $m = -\frac{5}{1}$ y-int (0, 3)

(b) $4x - 6y - 18 = 0$

$$\frac{4x}{6} - \frac{18}{6} = \frac{6y}{6}$$

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

$m = \frac{2}{3}$
y-int (0, -3)

(c) $5y - 9x = 15$

$$\frac{5y}{5} = \frac{9x}{5} + \frac{15}{5}$$

$$y = \frac{9}{5}x + 3$$

$m = \frac{9}{5}$ y-int (0, 3)

(d) $-7x - 8y + 32 = 0$

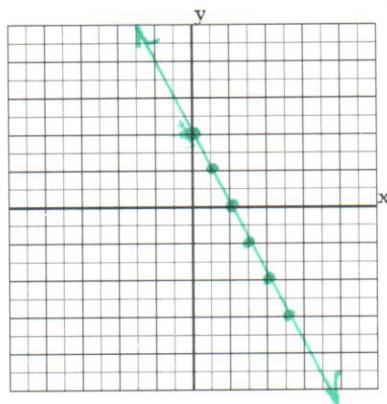
$$-\frac{7x}{8} + \frac{32}{8} = \frac{8y}{8}$$

$$-\frac{7}{8}x + 4 = y$$

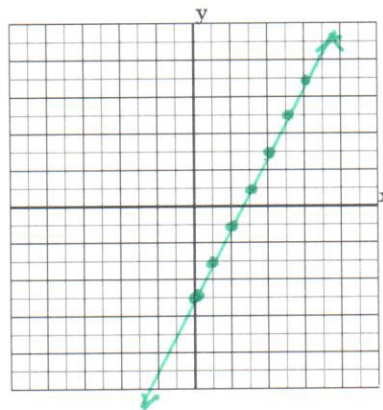
$m = -\frac{7}{8}$
y-int (0, 4)

3. Graph the following (use a table of values, or rearrange into $y = mx + b$ form). (K – 4 marks)

(a) $3y = -6x + 12 \xrightarrow{\div 3} y = -2x + 4$
 $m = -2$
(0, 4)



(b) $4x - 2y - 10 = 0 \rightarrow 4x - 10 = 2y$
 $2x - 5 = y$



$m = \frac{2}{1}$
(0, -5)