

ngsi Min(3) 4a

Maths D Weekend HW (Term 1 Wk 6)

Date 11/2/05

No.

1a $3x - 4y = 24$

$$-4y = -3x + 24$$

$$y = \frac{3}{4}x - 6$$

When intersects x-axis, $y = 0$,

$$\frac{3}{4}x - 6 = 0$$

$$x = 8$$

$$\therefore A(8, 0)$$

When intersects y-axis, $x = 0$,

$$y = -6$$

$$\therefore B(0, -6)$$

$$\therefore A(8, 0), B(0, -6)$$

1b grad of $l = \frac{3}{4}$

1c length of $AB = \sqrt{(8-0)^2 + (0+6)^2}$
 $= 10 \text{ units}$

1d Midpt of $AB = \left(\frac{8+0}{2}, \frac{0-6}{2}\right)$
 $= (4, -3)$

$$\therefore m(4, -3)$$

1e grad of $OM = \frac{-3-0}{4-0}$
 $= -\frac{3}{4}$

$$y = mx + c$$

$$-6 = \left(-\frac{3}{4}\right)(0) + c$$

$$c = -6$$

$$\therefore \text{eqn of line: } y = -\frac{3}{4}x - 6$$

2a $mx = ny + 5$

$$ny = mx - 5$$

When line $\parallel$ to x-axis, grad $= 0$

$$\therefore m = 0$$

$$\therefore \text{Condition, } n = 0$$

2b grad $= \frac{-2+3}{3-2}$
 $= 1$

$$y = mx + c$$

14/2/05

$$-2 = 1(3) + c$$

$$c = -5$$

$$\therefore \text{eqn of line: } y = x - 5$$

When $(8, k)$

$$k = 8 - 5$$

$$= 3$$

$$\therefore k = 3$$

3a When intersects y-axis, $x = 0$,

$$y = 8$$

$$\therefore A(0, 8)$$

3b When $(2, 48)$,

$$y = px^3 + 8$$

$$48 = p(2)^3 + 8$$

$$8p = 40$$

$$p = 5$$

$$4a \text{ grad} = \frac{-1+5}{2-1}$$

$$= 2$$

$$y = mx + c$$

$$-1 = 2(3) + c$$

$$c = -7$$

$$\therefore \text{eqn of line: } y = 2x - 7$$

When $(7, k)$,

$$k = 2(7) - 7$$

$$= 7$$

$$\therefore k = 7$$

$$4b \quad \frac{x}{3} + \frac{y}{2} = 1$$

$$2x + 3y = 6$$

$$3y = -2x + 6$$

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

Ang si min (3) 44

Date 11/2/05

No.

$$\therefore \text{grad of line} = -\frac{2}{3}$$

When cuts the x-axis, $y=0$,

$$-\frac{2}{3}x + 2 = 0$$

$$\therefore x = 3$$

$\therefore A(3, 0)$

When cuts the y-axis, $x=0$,

$$y = -\frac{2}{3}(0) + 2$$
$$= 2$$

$\therefore B(0, 2)$

- 4c; $y = \frac{1}{2}x + k$

When $A(-1, -3)$,

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

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

4ci	grad = $\frac{1}{2}$
-----	----------------------

$$y = mx + c$$

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

$$c = -\frac{1}{4}$$

$\therefore$ eqn of m: $y = \frac{1}{2}x - \frac{1}{4}$

TYS Maths D Pp 2 Pg 119



