

Questions from 7.1)

10c)  $y = mx - 2$  through the point  $(4, -8)$   
 $\downarrow \quad \downarrow$   
 $(x, y)$

$$-8 = m(4) - 2$$

$$-8 + 2 = 4m$$

$$-6 = 4m$$

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

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

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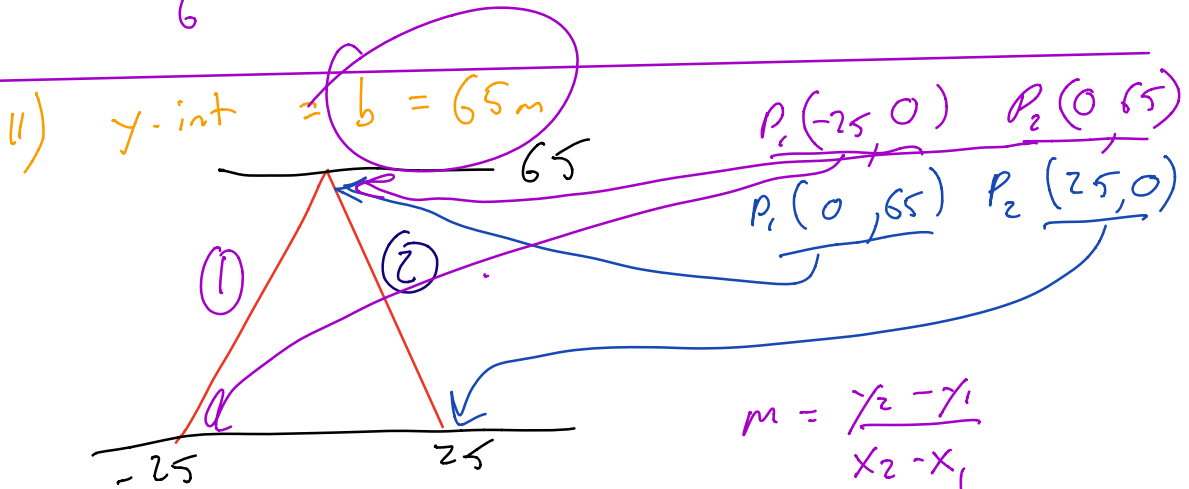
d)  $y = mx - 2$   $(-6, -1)$   
 $(x, y)$

$$-1 = m(-6) - 2$$

$$-1 + 2 = -6m$$

$$1 = -6m$$

$$-\frac{1}{6} = m$$



$$m = \frac{65 - 0}{0 - (-25)}$$

$$= \frac{65}{25}$$

$$= \frac{13}{5}$$

$$y = \frac{13}{5}x + 65$$

$$m = \frac{0 - 65}{25 - 0}$$

$$= \frac{-65}{25}$$

$$= -\frac{13}{5}$$

$$y = -\frac{13}{5}x + 65$$

7.2

#1

$$y = \frac{-3x}{2} + 4$$

→ General Form

$$Ax + By + C = 0$$

$$\rightarrow 0 = \frac{-3x}{2} - y + 4$$

just get  
-3/2 out  
from x

$$= \left(\frac{-2}{3}\right) \left(\frac{-3x}{2} - y + 4\right)$$

$$0 = x - \left(\frac{-2}{3}\right)y - \frac{2}{3}(4)$$

$$0 = x + \frac{2y}{3} - \frac{8}{3}$$

$$A = 1$$

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

↑  
be whole num br  
ie: no fraction +  
positive.

Easier

$$0 = -\frac{3x}{2} - y + 4$$

$$0 = 3x + 2y - 8 \quad \checkmark$$

$A = 3$

2e) Put into General form  
 $Ax + By + C = 0$   
A = whole number

$$y = .25x - .3$$

$$0 = .25x - y - .3$$

$$0 = x - 4y - 1.2 \quad \checkmark \quad A = 1$$

$x - 4y - 1.2 = 0 \quad \checkmark$

$$2f) y = -\frac{5}{2}x + \frac{1}{8}$$

$$\frac{5}{2}x + y - \frac{1}{8} = 0$$

$$5x + 2y - \frac{1}{4} = 0$$

$A \neq$  fraction

3a) Determine intercepts & graph.

$$2x + y - 9 = 0$$

x-int @  $y=0$

$$2x + 0 - 9 = 0$$

$$2x = 9$$
$$x = \frac{9}{2}$$

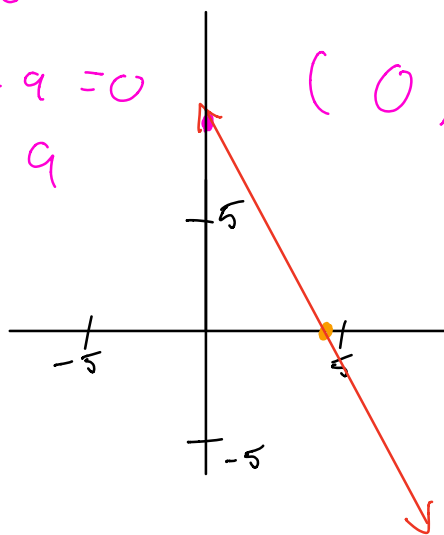
$$\left(\frac{9}{2}, 0\right)$$

y-int @  $x=0$

$$2(0) + y - 9 = 0$$

$$y = 9$$

$$(0, 9)$$



$$3b) 4x - y - 8 = 0$$

x int @  $y=0$

$$4x - 0 - 8 = 0$$

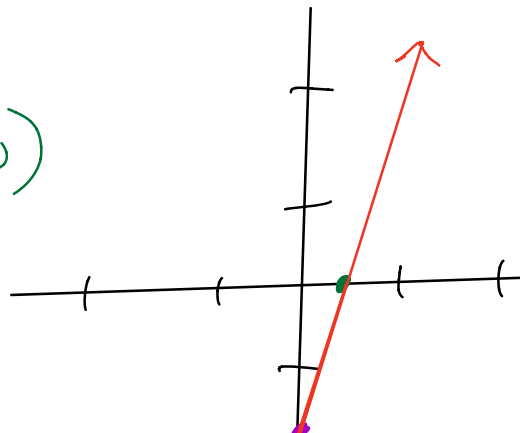
$$4x - 8 = 0$$

$$4x = 8$$

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

$$x = 2$$

$$(2, 0)$$



y-int @  $x=0$

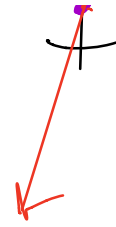
$$4(0) - y - 8 = 0$$

$$-y - 8 = 0$$

$$-y = 8$$

$$y = -8$$

$$(0, -8)$$



$$3h) 4x - 12 = 0$$

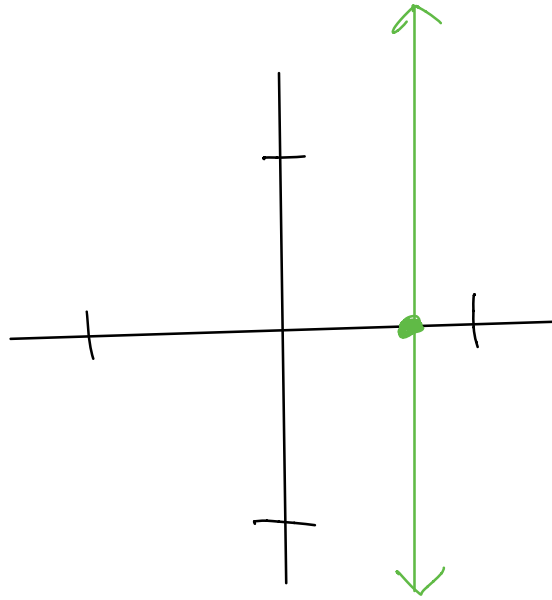
x-int

$$4x - 12 = 0$$

$$4x = 12$$

$$x = \frac{12}{4}$$

$$x = 3$$



$$4a) \text{ Domain} - \{x \mid x \in \mathbb{R}\}$$

$$\text{Range} - \{y \mid y = 2\}$$

$$x\text{-int} = \text{none}$$

$$y\text{-int} = \underline{2} \quad \underline{(0, 2)}$$

$$\text{slope} = 0$$

$$\text{eqn} = y = 2$$

$$y - 2 = 0$$

$$12) \text{ salt} = 1200 \frac{\text{kg}}{\text{m}^3} \quad \text{sand} = 1800 \frac{\text{kg}}{\text{m}^3}$$

$$a) \# \text{ salt} + \# \text{ sand} = 10,000$$

$$x(1200) + y(1800) = 10,000$$

$$1200x + 1800y - 10,000 = 0$$

General form

$$b) 1200x + 1800(5.22) = 10,000$$

$$x = \frac{10,000 - 1800(5.22)}{1200}$$

$$= .50$$

$$c) \frac{.5}{.5 + 5.22} \times 100\% \approx 8.75\%$$

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a) increase  $2 \frac{\text{g}}{\text{day}}$

What volume of peas?  
7

125 mL bran bud.

beans

$$21 = \#p + \#b + \#bb$$
$$21 = \frac{4p}{125} + \frac{7b}{125} + \underline{16}$$

$$0 = \frac{4p}{125} + \frac{7b}{125} + 16 - 21$$

$$0 = \frac{4p}{125} + \frac{7b}{125} - 5$$

$$0 = 4p + 7b - 625$$

a)  $b=0$

$$625 = 4p$$
$$\frac{625}{4} = p$$
$$156.25g = p$$

b)  $p=0$

$$625 = 7b$$
$$\frac{625}{7} = b$$
$$89.3g = b$$