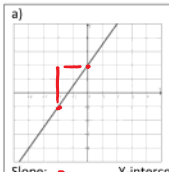
HW SOL 4.4

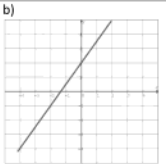
October 5, 2020 8:55 AM

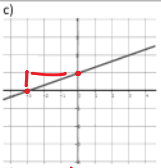
Name:_____ Date:_____

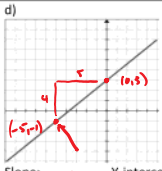
Math 9 HW Section 4.4 Graphing Lines in the form of y=mx+b

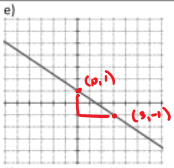
1. Given each graph below, indicate the slope "m" and Y-intercept "b"

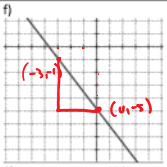
a) 
Slope: $\frac{3}{2}$ Y-intercept: (0,2)

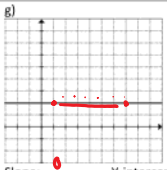
b) 
Slope: $\frac{3}{2}$ Y-intercept: (0,2)

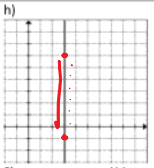
c) 
Slope: $m=\frac{1}{3}$ Y-intercept: (0,1)

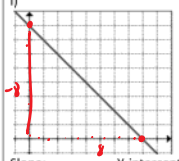
d) 
Slope: $m=\frac{4}{5}$ Y-intercept: (0,3)

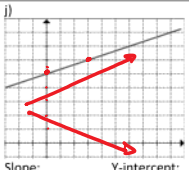
e) 
Slope: $=\frac{-2}{3}$ Y-intercept: (0,1)

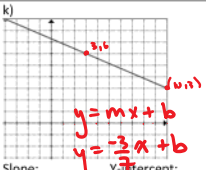
f) 
Slope: $-\frac{4}{3}$ Y-intercept: (4,-5)

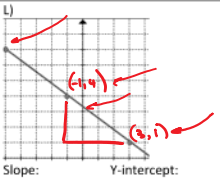
g) 
Slope: $\frac{0}{6}=0$ Y-intercept: (0,2)

h) 
Slope: UNDEFINED Y-intercept: NONE

i) 
Slope: $=-1$ Y-intercept: (0,8)

j) 
Slope: $m=\frac{1}{3}$ Y-intercept: (0,15)

k) 
Slope: $m=\frac{3}{7}$ Y-intercept: $6=\frac{-3}{7}(7)+b$

L) 
Slope: $m=-\frac{3}{4}$ Y-intercept: $y=mx+b$

$6=\left(-\frac{9}{7}\right)+b$

$+\frac{9}{7} \quad +\frac{9}{7}$

$6+\frac{9}{7}=b$

$\frac{42}{7}+\frac{9}{7}=b$

$\frac{51}{7}=b$

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

$4=-\frac{3}{4}(-1)+b$

$4=\frac{3}{4}+b$

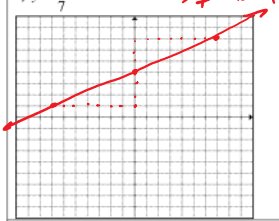
$-\frac{3}{4} \quad -\frac{3}{4}$

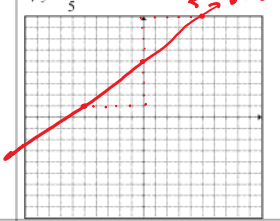
$3.25=b$

2. Given each line equation, indicate the slope "m" and Y-intercept "b"

a) $y=3x-2$ $m=3$ (0,-2) slope: y-intercept:	b) $y=4x+3$ $m=4$ (0,3) slope: y-intercept:	c) $y=-2x-4$ $m=-2$ (0,-4) slope: y-intercept:	d) $y=10-7x$ $m=-7$ (0,10) slope: y-intercept:
e) $y=\frac{x}{3}-1$ $=\frac{1}{3}x-1$ $m=\frac{1}{3}$ (0,-1) slope: y-intercept:	f) $y=\frac{4x}{5}+\frac{1}{2}$ $m=\frac{4}{5}$ $(0,\frac{1}{2})$ slope: y-intercept:	g) $y=\frac{4x+3}{2}$ $=\frac{4}{2}x+\frac{3}{2}$ $m=2$ (0,1.5) slope: y-intercept:	h) $y=-\frac{7}{3}x-8$ $m=-\frac{7}{3}$ (0,-8) slope: y-intercept:
i) $y=-\frac{5}{11}x-(-13)$ $m=-\frac{5}{11}$ (0,13) slope: y-intercept:	j) $2x+y=4$ $-2x \quad -2x$ $y=4+(-2x)$ slope: $m=-2$ y-intercept: (0,4)	k) $3y+4x=12$ $-4x \quad -4x$ $3y=-4x+12$ $y=-\frac{4}{3}x+\frac{12}{3}$ slope: $m=-\frac{4}{3}$ y-intercept: (0,4)	L) $y-8=2x-4$ $+8 \quad +8$ $y=2x+4$ slope: $m=2$ y-intercept: (0,4)

3. Given each line equation in the form of y=mx+b, graph the line with the grid provided:

a) $y=\frac{3}{7}x+4$ $m=\frac{3}{7}$ $b=4$ 

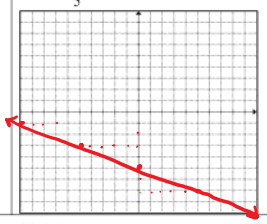
b) $y=\frac{4}{5}x+5$ $m=\frac{4}{5}$ $b=5$ 

c) $y=\frac{-2}{3}x-6$ $m=\frac{-2}{3}$ $b=-6$

d) $y=-\frac{2}{5}x-5$

c) $y = \frac{-2}{3}x - 6$ $m = \frac{-2}{3}$ $b = -6$

d) $y = -\frac{2}{5}x - 5$



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

① GRAPH

② y-intercept (a, b)

③ slope $= \frac{\text{RISE}}{\text{RUN}}$

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

$y = mx + b$

m: (slope) $m = \frac{-2}{3}$ ← RISE (DOWN 2), Run (RIGHT 3)

b: (y-intercept) ← $b = 5$ $(0, 5)$

RUN.

④ x-intercept (a, b)

④ $0 = \frac{-2}{3}x + 5$

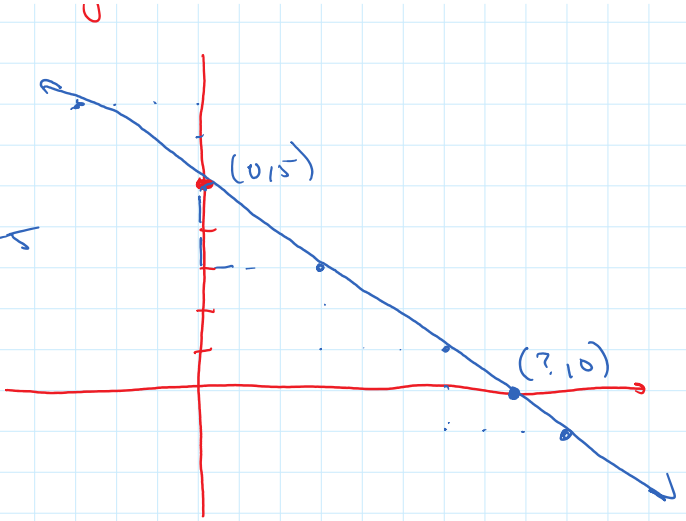
$\frac{-3}{2} \times -5 = \frac{-2}{3}x \cdot \frac{-3}{2}$

$7.5 = x$

$0 = \frac{2}{3}x + 5$

$-5 = \frac{2}{3}x$

$-5 = \frac{2}{3}x$



② EQN: $3x - 6y = 12$.

① y-intercept: ① make $x = 0$ solve for 'y'

② x-intercept: ① make $y = 0$ solve for 'x'

③ Graph:

④ Slope:

① make $x = 0$ solve for 'y'

$3x - 6y = 12$

$3(0) - 6y = 12$

$\frac{-6y}{-6} = \frac{12}{-6}$

$y = -2$

$(0, -2)$

② make $y = 0$ solve for x

$3x - 6y = 12$

$3x - 6(0) = 12$

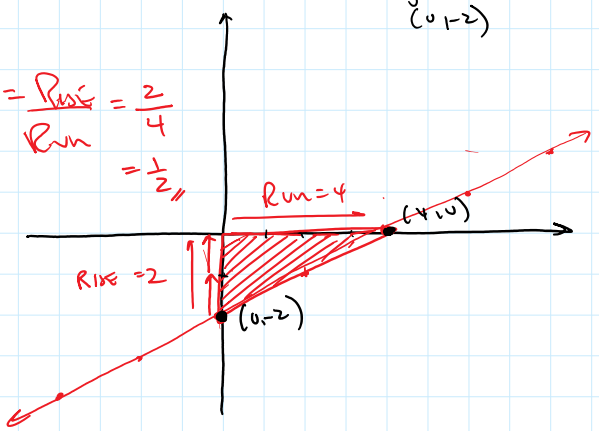
$3x = 12$

$x = 4.$

$(4, 0.)$

$m = \frac{\text{Rise}}{\text{Run}} = \frac{2}{4}$

$= \frac{1}{2}$



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

① y-intercept ① make x covers zero solve for y.

② slope:

③ Graph

④ x-intercept

$y = \frac{4}{2}(0) + \frac{3}{2}$

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

$(0, \frac{3}{2})$

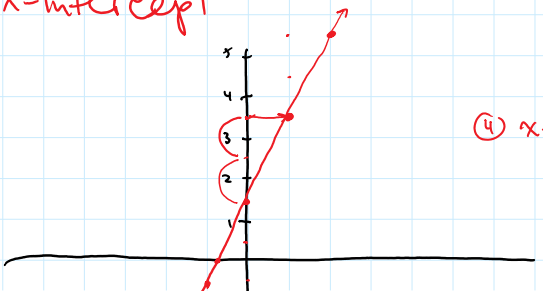
② slope: the slope is the fraction that 'x' is multiplied to

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

$m = \frac{4}{2}$

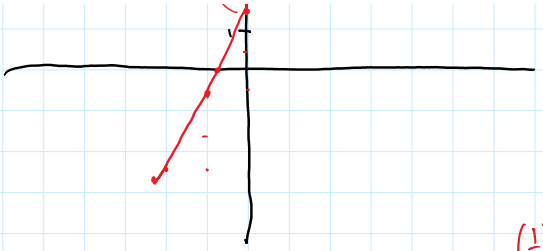
$= 2$

$= \frac{2}{1}$



④ x-intercept $y = 0$

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



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

$0 = 2x + \frac{3}{2}$ ① x is multiply by 2 ② add $\frac{3}{2}$ ① Subtr. $\frac{3}{2}$ ② Divide by 2

$-\frac{3}{2} \quad -\frac{3}{2}$

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

$\boxed{\frac{-3}{4} = x}$ $\left(\frac{-3}{4}, 0\right)$

(v) $y = \frac{-7x+8}{4} \Rightarrow y = \frac{-7}{4}x + \frac{8}{4}$

i) Find y-int

ii) Find slope.

iii) Graph.

iv) Find x-int.

i) $y = \frac{-7}{4}(0) + 2$

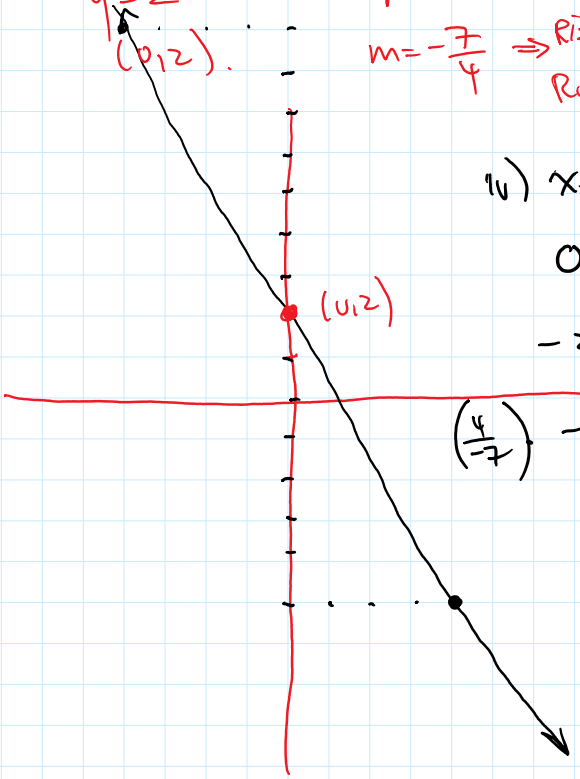
$y = 2$

$(0, 2)$.

ii) $y = \frac{-7}{4}x + 2$

$m = -\frac{7}{4} \Rightarrow$ Rise = 7 Down

Run = 4 Right.



iv) x-int

$0 = -\frac{7}{4}x + 2$

$-2 \quad -2$

$\left(\frac{4}{-7}\right) -2 = \frac{-7}{4}x \cdot \left(\frac{4}{-7}\right)$

$\boxed{\frac{8}{7} = x}$

$\left(\frac{8}{7}, 0\right)$