Homework review (4.2):

Page 219 (4, 8, 12, 16, 26, 36, 38)

#4 $3x - 2y = -5$ $(-1, 1)$

$3(-1) - 2(1) = -5$

$-3 - 2 = -5$

$-5 = -5$ SOLUTION!

#16 $3y + 4x = 12$

$3y = 12 - 4x$

$y = \frac{12}{3} - \frac{4x}{3}$

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

x	-1	0	1
y	$5\frac{1}{3}$	4	$2\frac{2}{3}$

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

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

$y = \frac{12}{3} + \frac{4}{3}$

$y = \frac{16}{3} = 5\frac{1}{3}$

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

$y = 4$

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

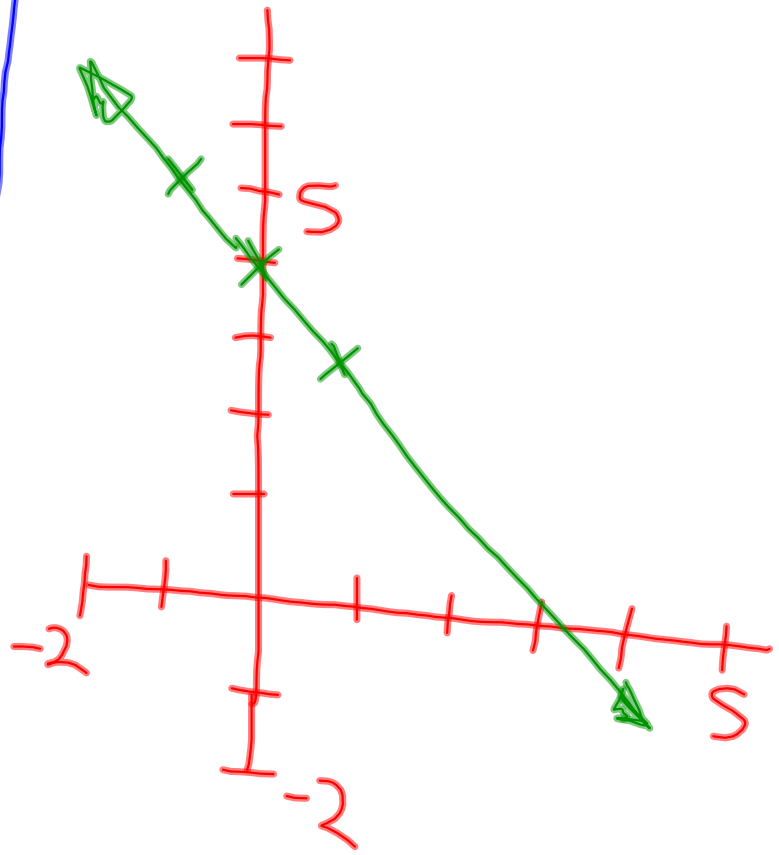
$y = 4 - \frac{4}{3}$

$y = \frac{12}{3} - \frac{4}{3}$

$y = \frac{8}{3} = 2\frac{2}{3}$

#16 (cont.)

x	-1	0	1
y	$5\frac{1}{3}$	4	$2\frac{2}{3}$

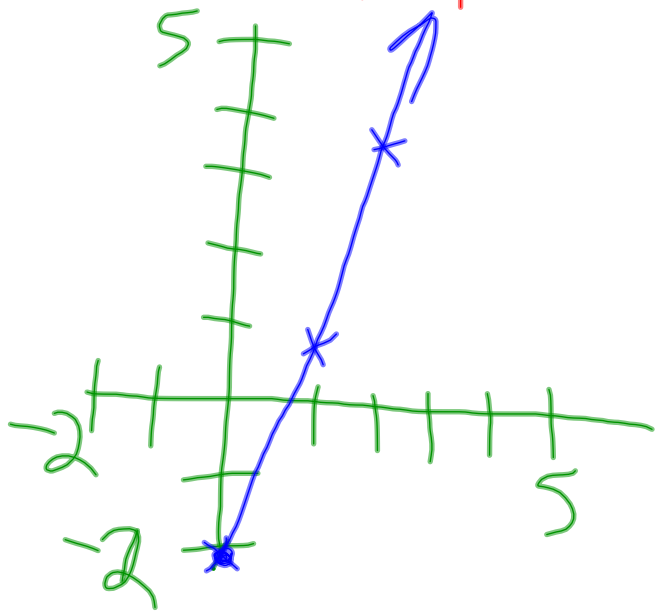


26) $y = 3x - 2 \quad x \geq 0$

x	0	1	2
y	-2	1	4

$y = 3(1) - 2$
$y = 3 - 2$
$y = 1$

$y = 3(2) - 2$
$y = 6 - 2$
$y = 4$



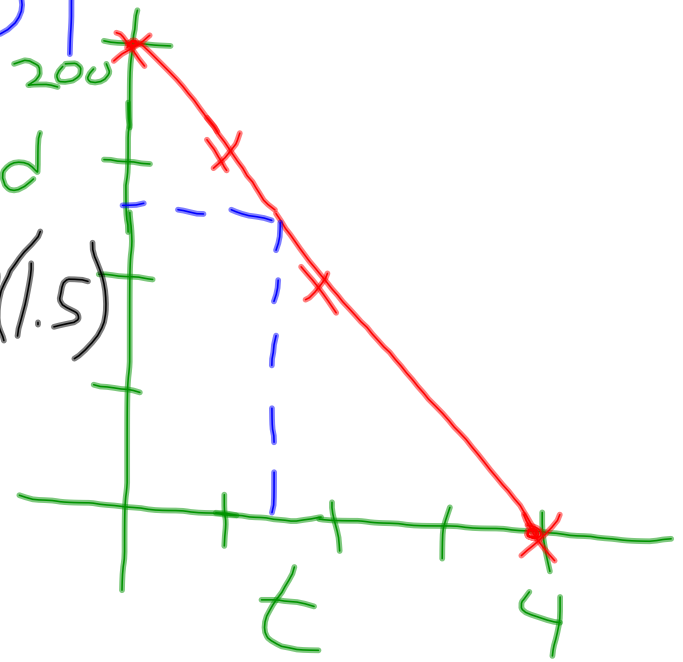
#36 $d_{max} = 200\text{ mi}$ } y (RANGE)

$t_{min} = 0\text{ hr}$

$t_{max} \approx 4\text{ hr}$ } x (DOMAIN)

$d = 200 - 50t$

t	0	1	2	4
d	200	150	100	0



$d = 200 - 50(1.5)$

$d = 200 - 75$

$d = 125$

#38 $C = 30f + 100$

C = TOTAL COST

f = YARDS of FABRIC

100 = COST TO DYE (DOLLARS)

$C = 30(3) + 100$

$C = 90 + 100$

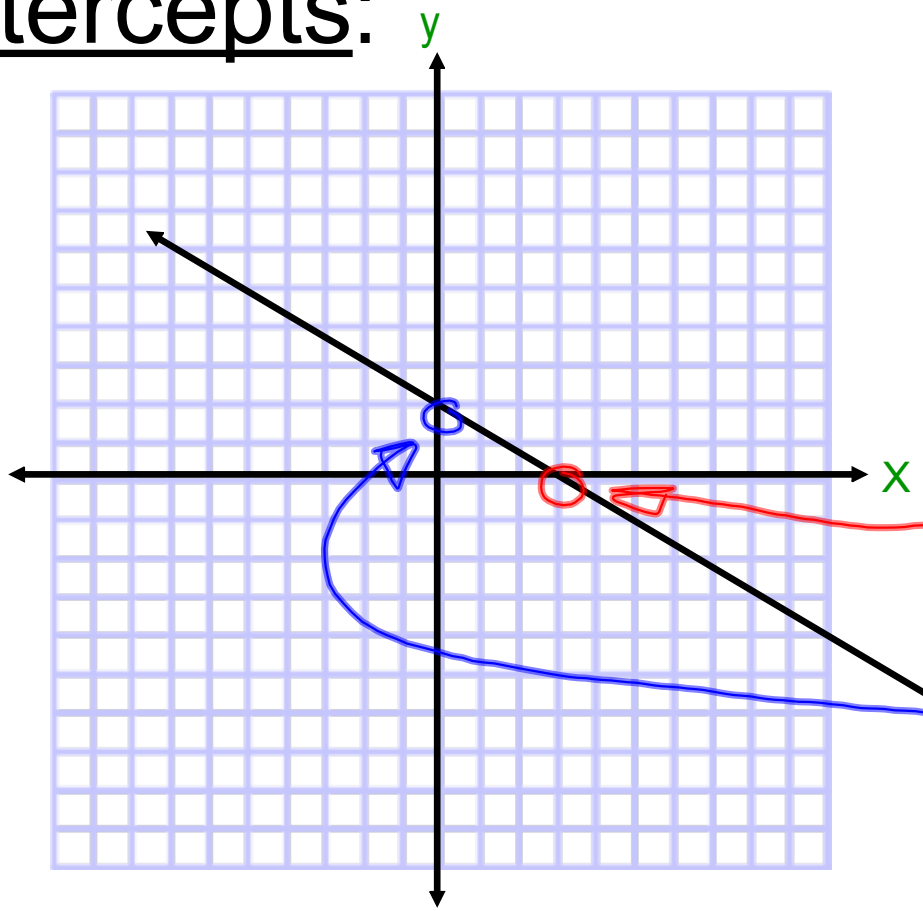
$C = 190$ DOLLARS FOR 3 YARDS FABRIC

FABRIC COST = \$500

\$30 / YARD FABRIC

$500 \div 3 = 16.\overline{6}$ OR 16 YRDS

Intercepts:



Where a graph crosses an axis

x-intercept: (y=0)

y-intercept: (x=0)

Finding Intercepts:

$2x + 3y = 18$

$2x+3(0)=18$

$2x+0=18$

$2x=18$

$x=9$

$2(0)+3y=18$

$3y=18$

$y=6$

x-intercept: y = 0

$(9,0)$

y-intercept: x = 0

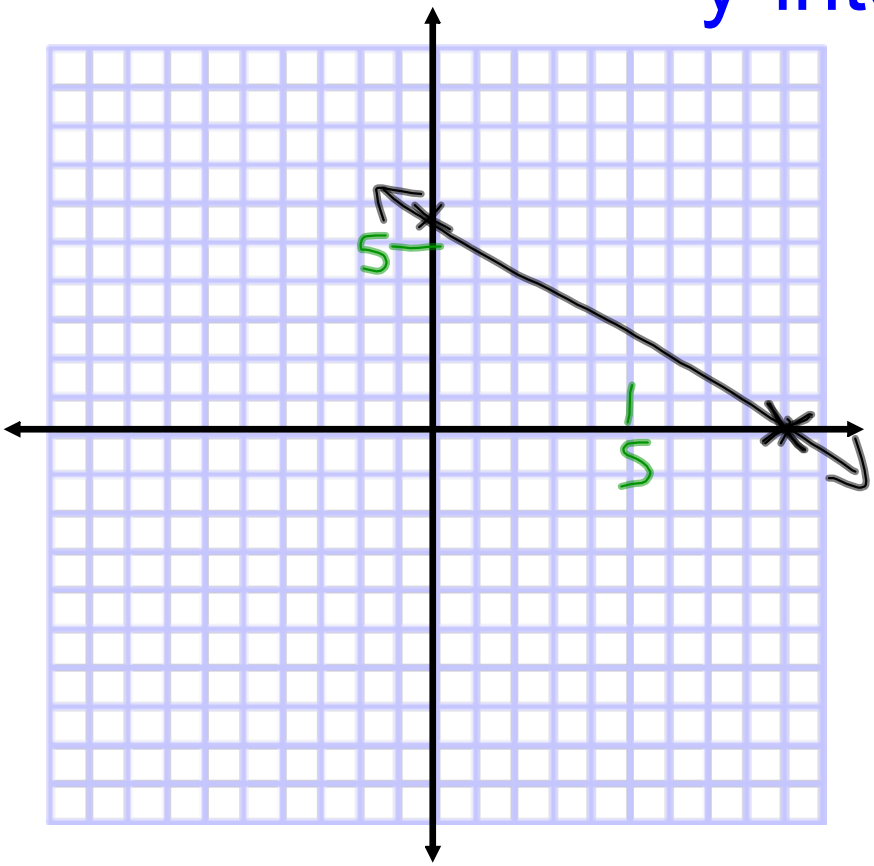
$(0,6)$

Graphing by finding intercepts:

$2x + 3y = 18$

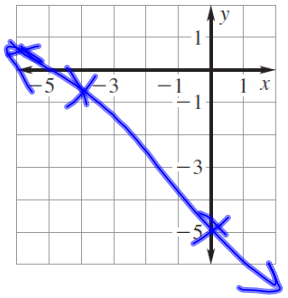
x-intercept: 9

y-intercept: 6



x	y
9	0
0	6

13. $y = -x - 4$



x	y
0	−4
−4	0

$y = -0 - 4$

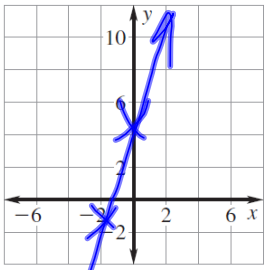
$y = -4$

$0 = -x - 4$

$4 = -x$

$-4 = x$

14. $y = 6 + 3x$



x	y
0	6
−2	0

$y = 6 + 3(0)$

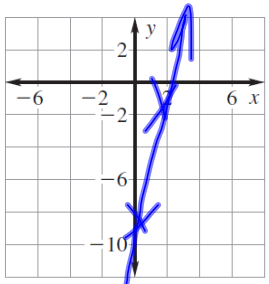
$y = 6$

$0 = 6 + 3x$

$-6 = 3x$

$-2 = x$

15. $y = 8x - 7$



x	y
0	−7
7/8	0

$y = 8(0) - 7$

$y = -7$

$0 = 8x - 7$

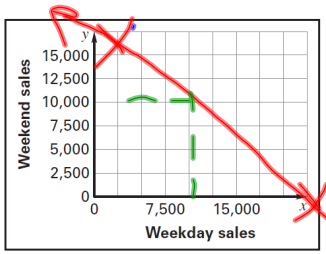
$7 = 8x$

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

Home and Garden Show Admission to a home and garden show costs \$7 per person during the week and \$9 per person on the weekend. During one week of the show, a total of \$142,506 was paid in admissions. This situation can be represented by the equation $7x + 9y = 142{,}506$ where x is the number of tickets sold during the week and y is the number of tickets sold on the weekend.

a. Find the intercepts of the graph of the equation. Graph the equation.

b. Give three possibilities for the number of each kind of ticket that could have been sold for the week.



$7(0)+9y=142506$

$9y=142506$

$y=15834$

$7x+9(0)=142506$

$7x=142506$

$x=20358$

3 POSSIBLE VALUES:

0 AND 15,834

20,358 AND 0

3rd VALUE, START WITH 7,500 AND 10,000 (=142500), THEN MOVE X & Y VALUES BY 1.

ENDS UP AT X=7497 AND Y=10003.

Homework p. 229:
2, 3, 6-24 (every 3rd), 32, 34, 45, 46