

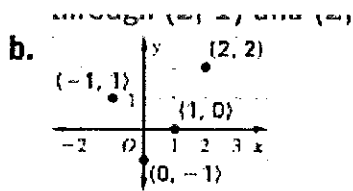
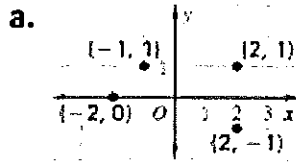
KEY

HOMEWORK Chapter 8:

- \_\_\_\_\_ Lesson 8.1 p. 404 #10, 12, 14, 16, 20, 21, 22, 25
- \_\_\_\_\_ Lesson 8.2 p. 410 #13, 15, 21, 22, 23, 26, 27, 32, 38, 41, 42
- \_\_\_\_\_ Lesson 8.3 p. 416 #15, 18, 19, 28, 29, 46, 47 & Graph and describe the function  $y = 2x^3 + 3$
- \_\_\_\_\_ Lesson 8.4 p. 423 #8-10, 13, 18-21, 22, 24, 25, 27, 34, ~~39~~<sup>35</sup>
- \_\_\_\_\_ Lesson 8.5 p. 433 # 10-12, 14-19, 22-30 evens
- \_\_\_\_\_ Mid-Chapter Quiz (8.1-8.5) p. 438 all
- \_\_\_\_\_ Lesson 8.6 p. 442 # 8-24 evens; 32
- \_\_\_\_\_ Lesson 8.7 p. 451 # 11-16 all; 17-27 odds; 28 & 29
- \_\_\_\_\_ Lesson 8.8 p. 457 # 7, 8, 13, 14, 15, 17, 21, 23, 25(a&c only)
- \_\_\_\_\_ Lesson 8.9 p. 464 # 16-30 evens; 33, 35-37
- \_\_\_\_\_ End-Chapter Quiz (8.6-8.9) p. 470 #1-25 odds
- \_\_\_\_\_ Test



**Example 4** Tell whether the relation represented by the graph is a function.



**Lesson 8.1**

HW: p. 404 #10, 12, 14, 16, 20, 21, 22, 25

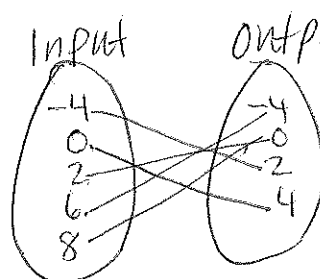
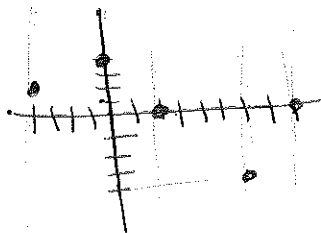
⑩ Domain:  $\{-4, -3, 2, 4\}$

order least to greatest.  
only write repeating #'s 1x.

Range:  $\{-1, 0\}$

⑫ A relation is sometimes a function

⑭

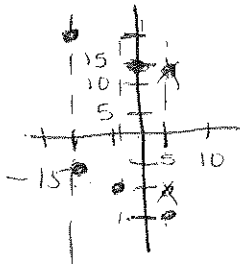


**YES!**  
for every input there is 1 output.

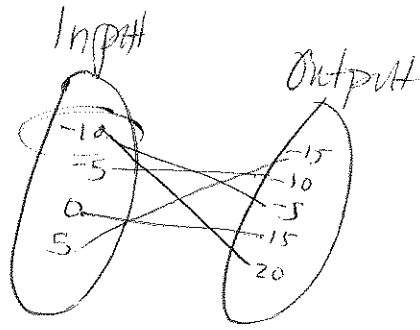
16, 20, 21, 22, 25

16

Domain:  $\{-10, -5, 0, 5\}$   
 Range:  $\{-15, -10, -5, 15, 20\}$



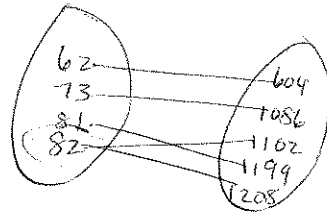
NO!



NO! -10 has 2 "y" solutions.

20

NO!  $x=0$  has 2 y solutions  
 $x=1$  " " " "  
 $x=2$  " " " "



21

Domain:  $\{62, 73, 81, 82\}$

Range:  $\{604, 1086, 1102, 1199, 1208\}$

NO! 82 has 2 "y" solutions

Whenever the "x" column has less #'s than the y, it will NOT be a function.

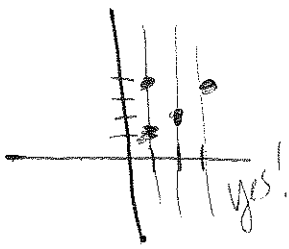
22

(A) Yes! Every Advisory # has it's own wind Speed #

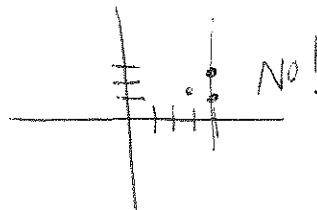
(B) Advisories 20-30

25

(1, 4) (2, 3) (3, 4)



Inverse: (4, 1) (3, 2) (4, 3)





23

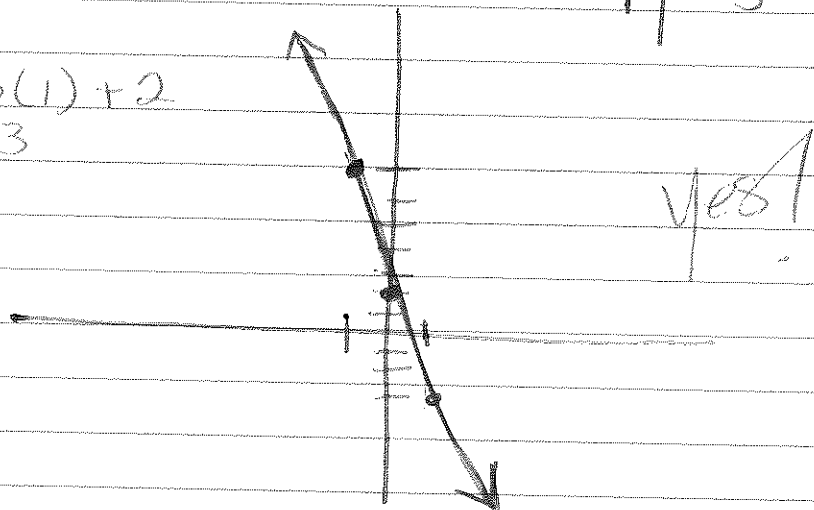
$$y = -5x + 2$$

$$y = -5(-1) + 2$$
$$y = 7$$

$$y = -5(0) + 2$$
$$y = 2$$

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

x	y
-1	7
0	2
1	-3



26

$$3x - y = 5$$
$$-3x \quad -3x$$

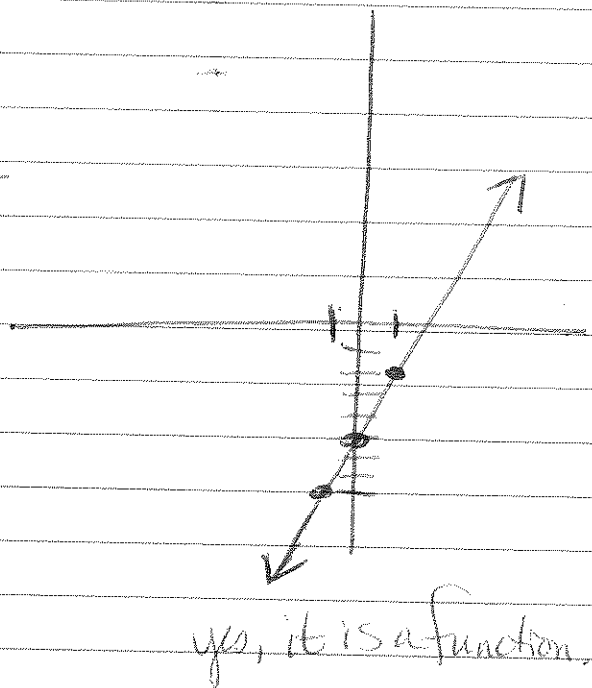
$$\frac{-y}{-1} = \frac{-3x + 5}{-1}$$

$$y = 3x - 5$$

$$3(-1) - 5$$
$$-3 - 5$$
$$-8$$

$$3 - 5$$

x	y
-1	-8
0	-5
1	-2





(41B)  $f = 3$

$$s = \frac{3 - 1.19}{2.13}$$

$$s = \frac{1.81}{2.13}$$

$$s = 0.849$$

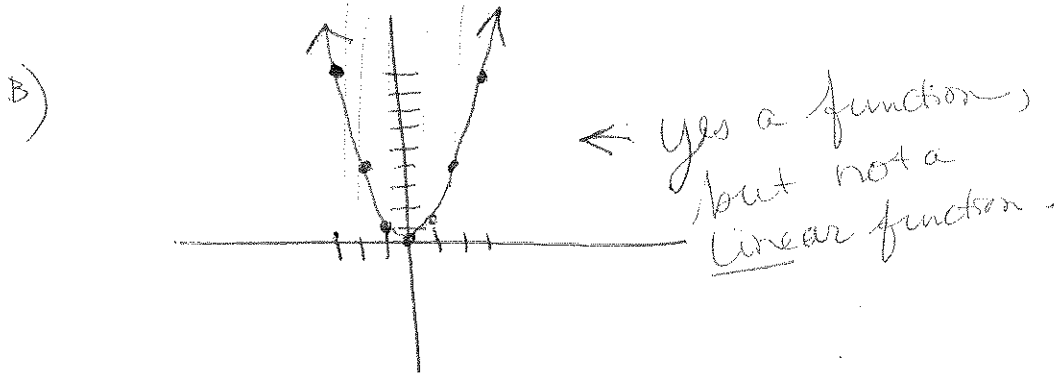
$0.8 \text{ m/sec}$

(42)

$$y = x^2$$

A)

x	-3	-2	-1	0	1	2	3
y	9	4	1	0	1	4	9



C)  $y = x^2$  is NOT linear.

$y = x^2$  IS A FUNCTION! Yes!

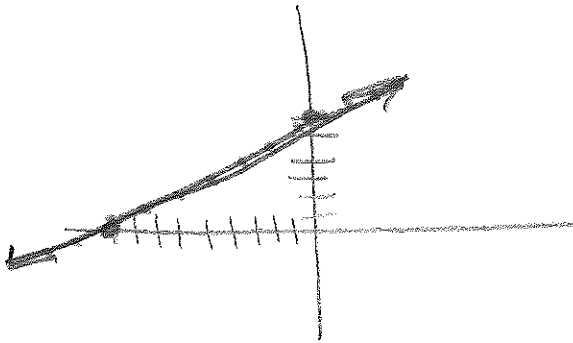


# Lesson 8.3

p. 4/6 #15, 18, 19, 28, 29, 46, 47 graph  $y = 2x^2 + 3$

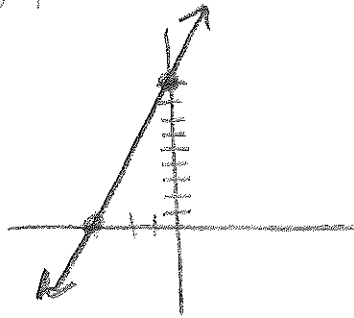
⑮  $2x - 3y = -18$

X	Y
0	6
-9	0



⑱  $y = 3x + 9$

X	Y
0	9
-3	0

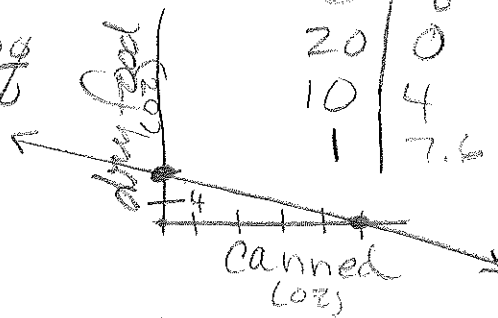


⑲  $40x + 100y = 800$

X	Y
0	8
20	0
10	4
1	7.6

$$\begin{array}{r} 40 + 100y = 800 \\ -40 \quad -40 \\ \hline 100y = 760 \\ 100 \quad 100 \\ \hline y = 7.6 \end{array}$$

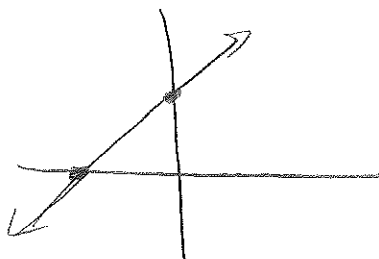
$$\begin{array}{r} 40x + 100y = 800 \\ 40x = 800 \\ \hline 40 \quad 40 \\ 100y = 400 \end{array}$$



0oz of canned & 8oz dry  
 10oz of canned & 4oz dry  
 20oz of canned & 0oz of dry.

1oz of canned & 7.6oz dry

⑳



upward

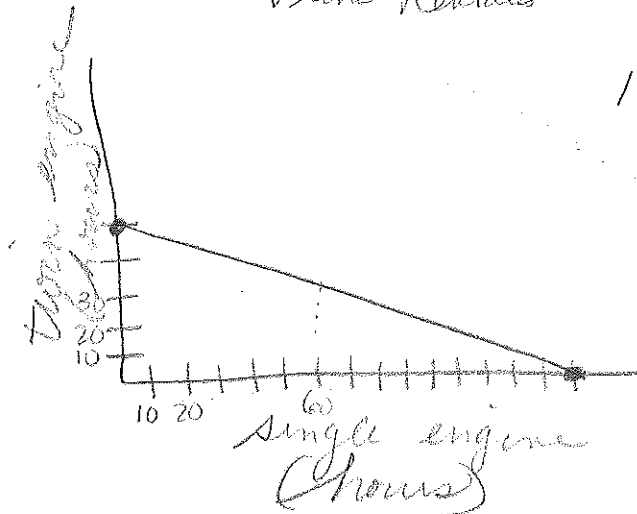
(29)  $60x + 180y = 900$

$$\frac{900 \div 9}{180 \div 9} = \frac{10}{2} = 5$$

$$\frac{900}{60} = 3 \quad \frac{30}{2}$$

Plane Rentals

x	y
0	50
150	0



c) about 60 hours

(46)  $y = 4x + 32$

make "y" zero.

$$0 = 4x + 32$$

$$-32 \quad -32$$

$$-32 = 4x \quad \boxed{x = -8}$$

x intercept  
B

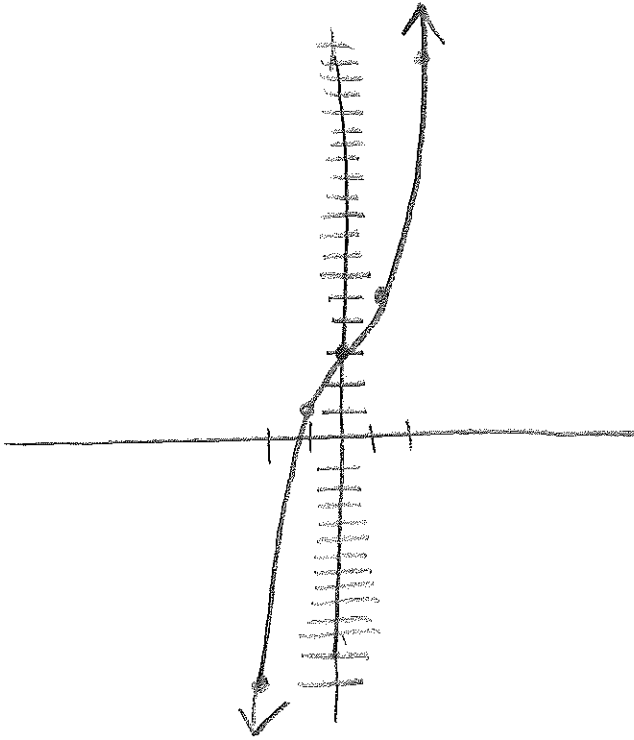
(47)  $5x + 24 = 30$

make "x" zero.

$$y = 15$$

y intercept  
I

$$y = 2x^3 + 3$$



x	y
-2	-13
-1	1
0	3
1	5
2	19

Non-linear  
increasing  
function.



# Lesson 8.4

p. 423 # 8-10, 13, 18-21, 22, 24, 25, 27, 34, 39

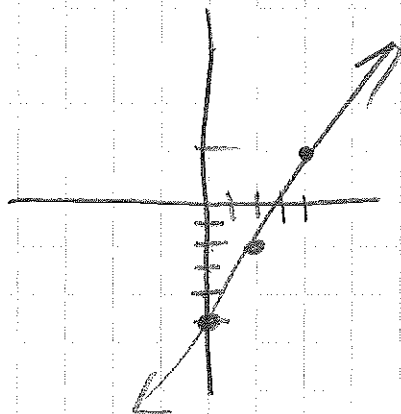
8 positive;  $\frac{3}{4}$

9 negative;  $-\frac{3}{4}$

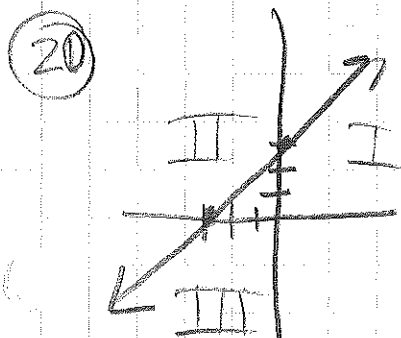
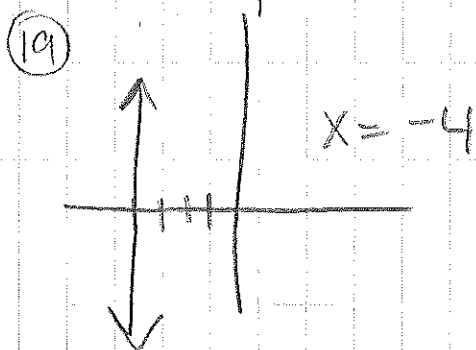
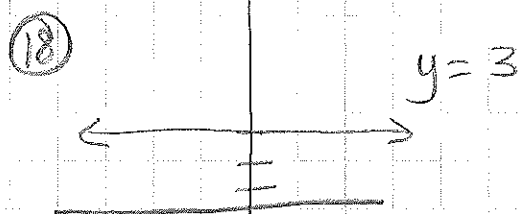
10 Undefined

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

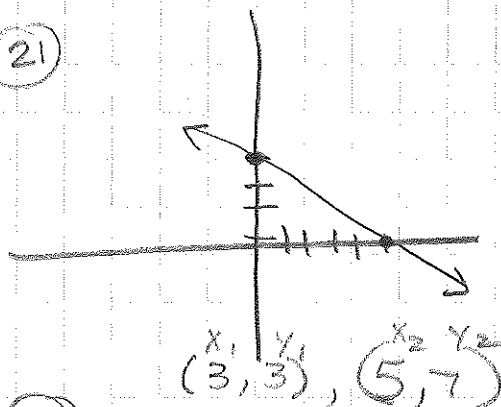
x	y
0	-5
2	-2
4	1



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



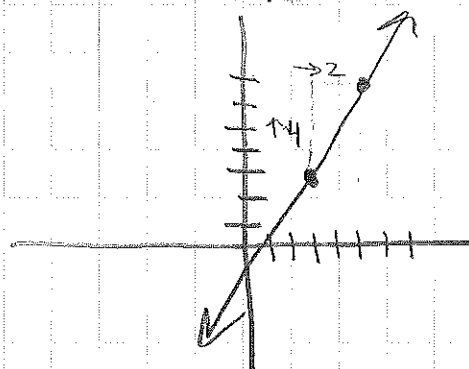
21



22

$$\frac{y_2 - y_1}{x_2 - x_1} = \frac{7 - 3}{5 - 3} = \frac{4}{2} = 2$$

OR



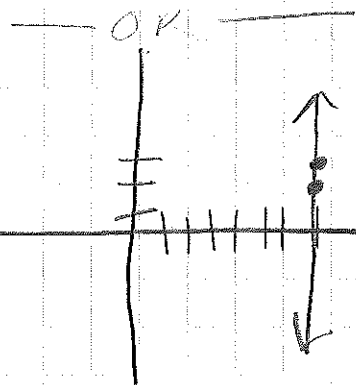
$$\frac{\text{rise}}{\text{run}} = \frac{4}{2} = 2$$

24

(7, 3) (7, 2)

$$\frac{2 - 3}{7 - 7} = \frac{-1}{0}$$

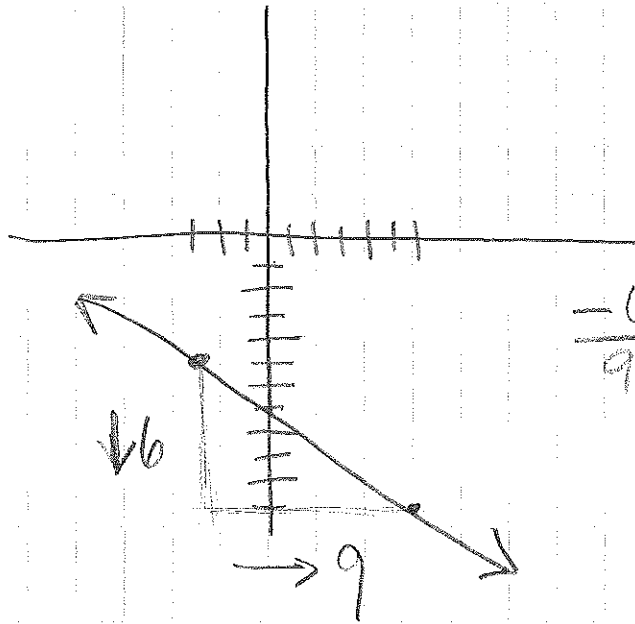
UNDEFINED



25, 27, 34, 39

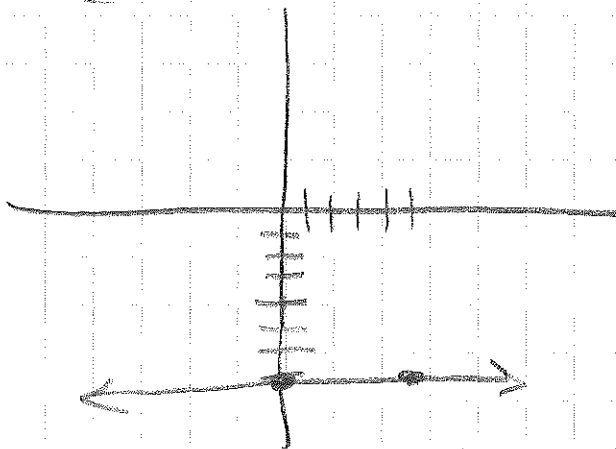
(25)  $(-3, -5), (6, -11)$

$$\frac{-11 - (-5)}{6 - (-3)} = \frac{-6}{9} = \boxed{-\frac{2}{3}}$$



$$\frac{-6}{9} = \boxed{-\frac{2}{3}}$$

(27)  $(5, -7), (0, -7)$

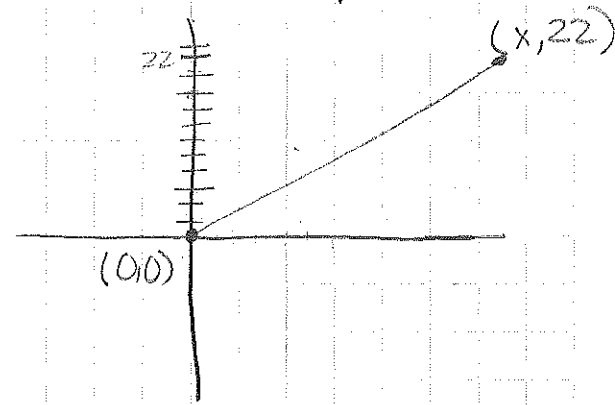
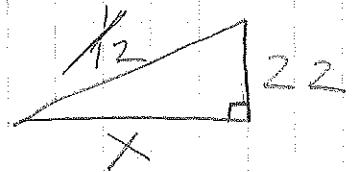


$m = 0$  (zero)

$$\frac{-7 - (-7)}{0 - 5} = \frac{0}{-5} = 0$$

(34) zero slope is a horizontal line, an undefined slope is a vertical line.  
zero slope is  $y =$   
undef slope is  $x =$

(35)



$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$\frac{1}{12} = \frac{22 - 0}{x - 0}$$

$$\frac{1}{12} = \frac{22}{x}$$

$$\begin{array}{r} 22 \\ \times 12 \\ \hline 264 \end{array}$$

$x = 264$  inches

or  
 $x = 22$  feet

p. 433 # 10-12, 14-19, 22-30 evens

⑩  $y = x + 2$

positive slope  
y-intercept @ 2

"C"

⑪  $y = -x + 2$

neg. slope  
y-int @ 2

"A"

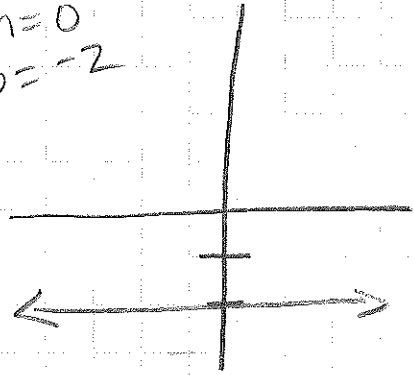
⑫  $y = x - 2$

pos. slope  
y-int = -2

"B"

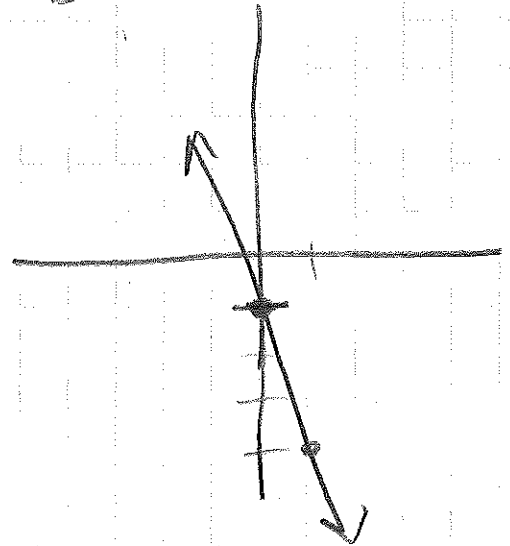
⑬  $y = -2$

$m = 0$   
 $b = -2$



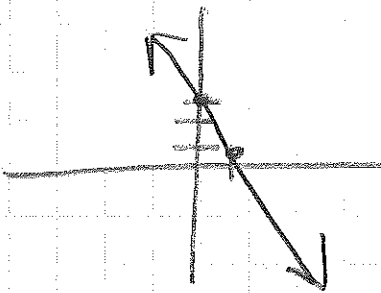
⑭  $3x + y = -1$   
 $y = -3x - 1$

$m = -3$   
 $b = -1$



⑮  $m = -2$   
 $b = 3$

rise = -2 ↓ 2  
run = 1 → 1

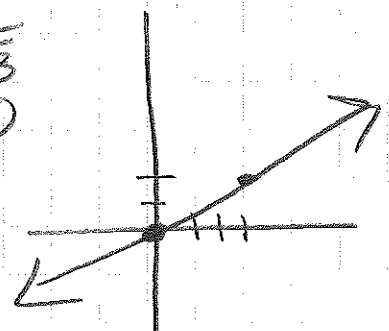


⑯  $2x - 3y = 0$

$-3y = -2x$   
 $-3$       $-3$

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

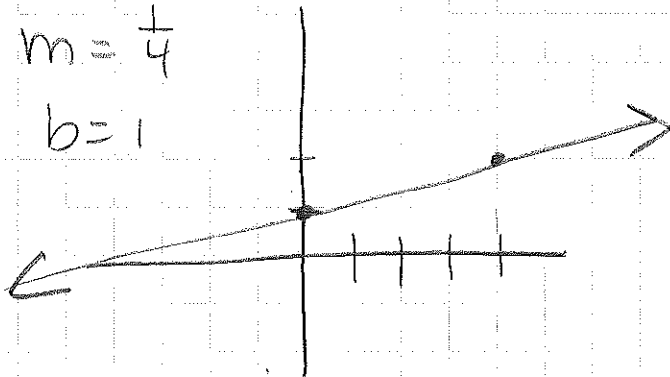
$m = \frac{2}{3}$   
 $b = 0$



⑰  $y = \frac{1}{4}x + 1$

$m = \frac{1}{4}$

$b = 1$



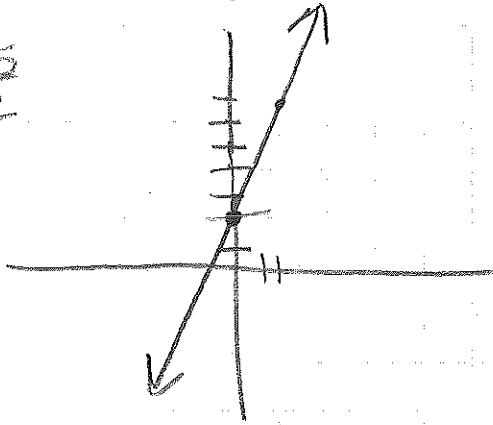
$$\textcircled{19} \quad 5x - 2y = -4$$

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

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

$$m = \frac{5}{2}$$

$$b = 2$$



$$\textcircled{30} \quad \frac{\text{rise}}{\text{run}} = \frac{+1}{+4} = \frac{1}{4}$$

$$\parallel \Rightarrow m = \frac{1}{4}$$

$$\perp \Rightarrow m = -4$$

$$\textcircled{22} \quad y = 8x + 5$$

$$\parallel \text{-parallel} = m = 8$$

$$\perp \text{-perpendicular} = m = -\frac{1}{8}$$

$$\textcircled{24} \quad y = -7x + 4$$

$$\parallel \Rightarrow m = -7$$

$$\perp \Rightarrow m = \frac{1}{7}$$

$$\textcircled{26} \quad 11x + 6y = 18$$

$$\frac{6y}{6} = \frac{-11x + 18}{6}$$

$$y = -\frac{11}{6}x + 3$$

$$\parallel \Rightarrow m = -\frac{11}{6}$$

$$\perp \Rightarrow m = \frac{6}{11}$$

$$\textcircled{28} \quad (x_1, y_1) \quad (x_2, y_2)$$

$$(1, 1) \quad (2, 4)$$

$$\frac{y_2 - y_1}{x_2 - x_1} = \frac{4 - 1}{2 - 1} = \frac{3}{1} = 3$$

$$\parallel \Rightarrow m = 3$$

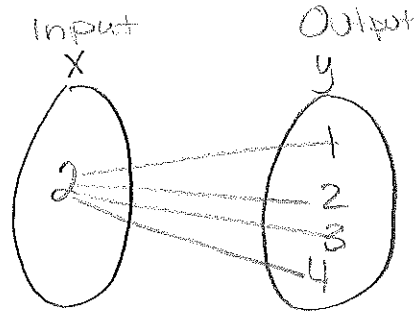
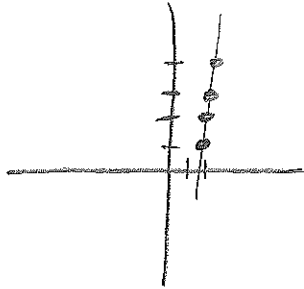
$$\perp \Rightarrow m = -\frac{1}{3}$$



# Mid-Chapter Quiz

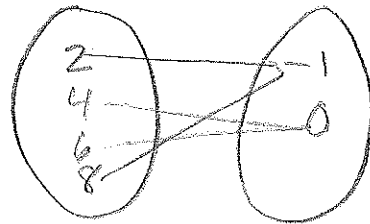
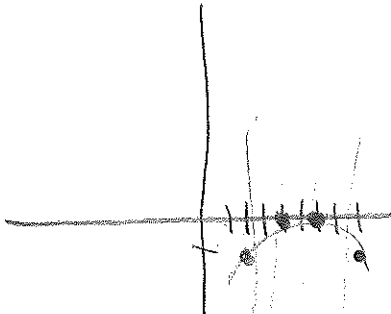
p. 438 all

- ①  $(2,1)$   $(2,2)$   $(2,3)$   $(2,4)$



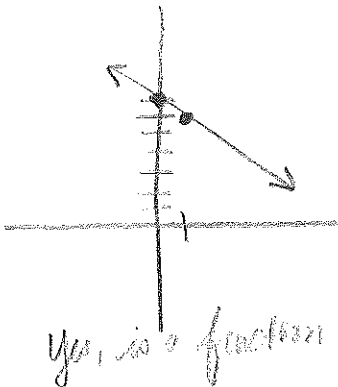
Not a function!  
Completely fails the  
Vertical line test.

- ②  $(8,-1)$   $(6,0)$   $(4,0)$   $(2,-1)$

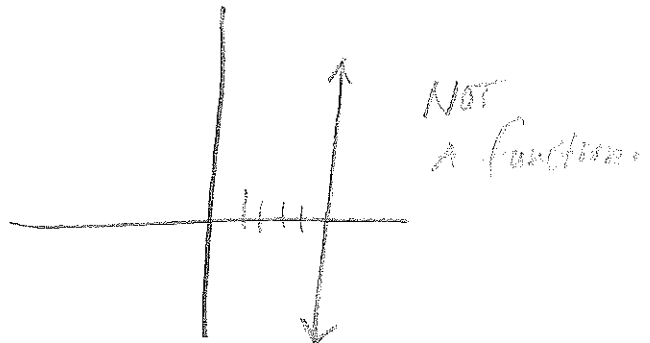


Yes, a function!  
for every  $x$  there is 1  $y$ .

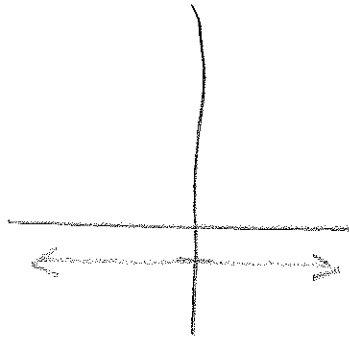
- ③  $y = -x + 7$



- ④  $x = 5$



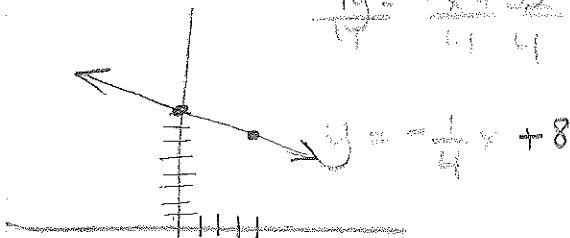
$$\textcircled{5} \quad y = -1$$



Yes, a function

$$\textcircled{6} \quad X + 4y = 32$$

$$\frac{4y}{4} = \frac{-x + 32}{4}$$



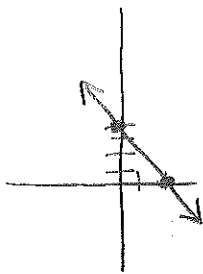
Yes a function

$$\textcircled{7} \quad 6x + 3y = 12$$

$$6(0) + 3y = 12$$

$$3y = 12$$

$$y = 4$$



$$6x + 3(0) = 12$$

$$6x = 12$$

$$x = 2$$

X-intercept: 2

y-intercept: 4

X	y
0	4
2	0

$$\textcircled{8} \quad 4x - y = 8$$

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

$$\frac{-y}{-1} = \frac{8}{-1}$$

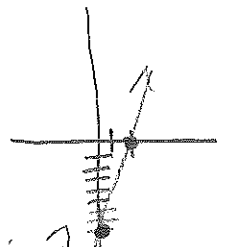
$$y = -8$$

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

$$4x = 8$$

$$x = 2$$

X	y
0	-8
2	0



X-intercept: 2

y-intercept: -8

$$\textcircled{9} \quad y = 2x - 6$$

$$y = 2(0) - 6$$

$$y = -6$$

$$0 = 2(x) - 6$$

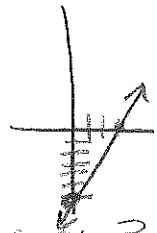
$$+6$$

$$+6$$

$$\frac{6}{2} = \frac{2x}{2}$$

$$x = 3$$

X	y
0	-6
3	0



X-intercept: 3

y-intercept: -6

$$\textcircled{10} \quad -5x + 2y = 10$$

$$-5(0) + 2y = 10$$

$$\frac{2y}{2} = \frac{10}{2}$$

$$y = 5$$

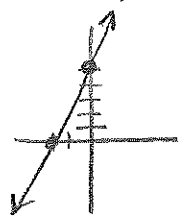
$$-5x + 2(0) = 10$$

$$\frac{-5x}{-5} = \frac{10}{-5}$$

$$x = -2$$

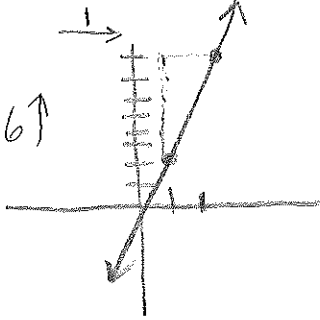
X-int: -2 ; y-int: 5

X	y
0	5
-2	0



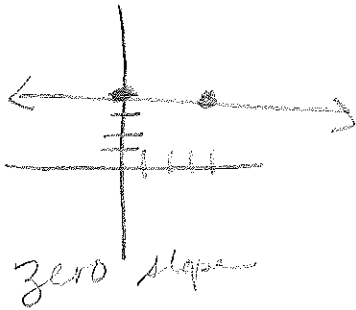
$$\textcircled{11} \quad \begin{matrix} x_1 & y_1 & x_2 & y_2 \\ (1, 2) & & (2, 8) & \end{matrix}$$

$$\frac{y_2 - y_1}{x_2 - x_1} = \frac{8 - 2}{2 - 1} = \frac{6}{1} = \boxed{6}$$



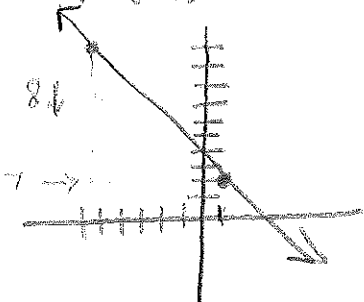
$$\textcircled{12} \quad \begin{matrix} x_1 & y_1 & x_2 & y_2 \\ (0, 4) & & (4, 4) & \end{matrix}$$

$$\frac{y_2 - y_1}{x_2 - x_1} = \frac{4 - 4}{4 - 0} = \frac{0}{4} = \boxed{0}$$



$$\textcircled{13} \quad \begin{matrix} x_1 & y_1 & x_2 & y_2 \\ (-6, 10) & & (1, 2) & \end{matrix}$$

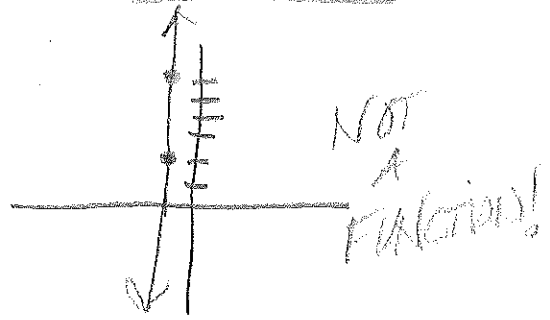
$$\frac{2 - 10}{1 - (-6)} = \frac{-8}{7}$$



$$\textcircled{14} \quad \begin{matrix} x_1 & y_1 & x_2 & y_2 \\ (-1, 2) & & (-1, 6) & \end{matrix}$$

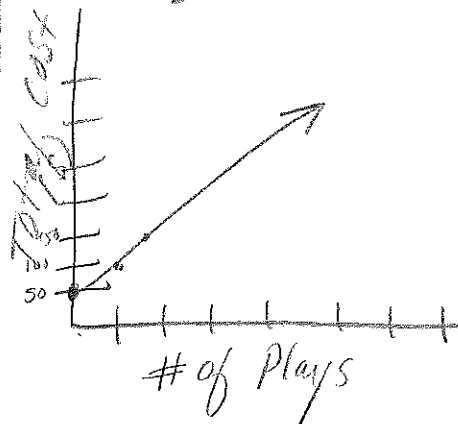
$$\frac{6 - 2}{-1 - (-1)} = \frac{4}{0}$$

UNDEFINED!!



$$\textcircled{15} \quad y = 40x + 50$$

Drama



$$x = 0 \quad y = 50$$

$$x = 1 \quad y = 90$$

$$x = 2 \quad y = 130$$



Lesson 8.6 p. 442 #8-24 evens & 32

8.  $m = -3$   
 $b = 5$

$$y = -3x + 5$$

10.  $m = 13$   
 $b = -8$

$$y = 13x - 8$$

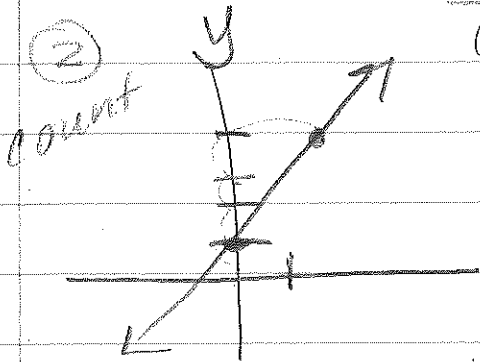
3 ways to solve:

12.  $(x_1, y_1)$   
 $(1, 4)$   
 $(x_2, y_2)$   
 $(0, 1)$

① Slope:  $\frac{y_2 - y_1}{x_2 - x_1}$

$$y = 3x + 1$$

$$\frac{1 - 4}{0 - 1} = \frac{-3}{-1} = 3$$



$$\frac{\text{rise } +3}{\text{run } +1} = 3$$

y-intercept @ 1

$$y = 3x + 1$$

③ Point Slope

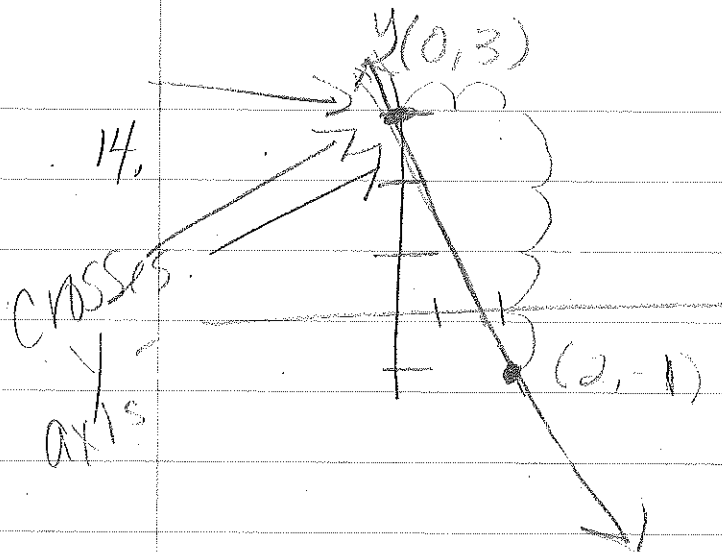
$$y - y_1 = m(x - x_1)$$

$$y - 4 = 3(x - 1)$$

$$y - 4 = 3x - 3$$

+4            +4

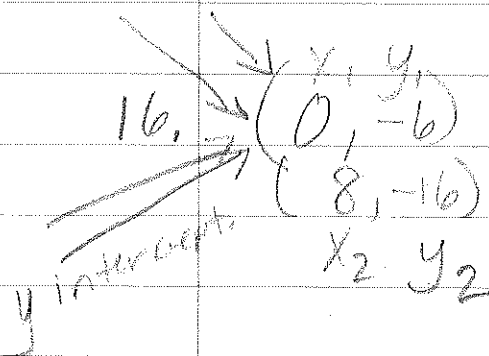
$$y = 3x + 1$$



$$\frac{\text{rise}}{\text{run}} = \frac{+4}{-2} = -2$$

$$b = 3$$

$$y = -2x + 3$$



$$\frac{y_2 - y_1}{x_2 - x_1} = \frac{-16 - (-6)}{8 - 0} =$$

$$\frac{-16 + 6}{8} = \frac{-10}{8} = \frac{-5}{4}$$

$$y = -\frac{5}{4}x - 6$$

18.

$$y = 2x + 1 \quad (0, 4)$$

parallel lines

have the same slope!

$$b = 4$$

$$m = 2$$

point  $(x_1, y_1)$  or

use point-slope

$$y = 2x + 4$$

$$y - y_1 = m(x - x_1)$$

$$y - 4 = 2(x - 0)$$

$$y - 4 = 2x$$

$$y = 2x + 4$$

20.  $y = -8x + 9$   $(0, -2)$   
 $\rightarrow \uparrow \uparrow \uparrow$  y-intercept

$m = -8$   $b = -2$

$y = -8x - 2$

22.  $y = x - 7$   $(0, -5)$  Perpendicular  
 $\rightarrow \uparrow \uparrow$  Lines have Slopes

original Slope = 1 y-intercept that are opposite  
 $\perp$  Slope = -1 reciprocals (or said  
 negative reciprocals)

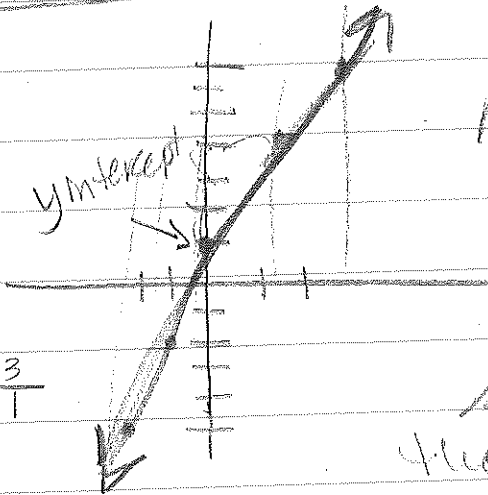
$b = -5$

$y = -x - 5$

24.

x	-2	-1	0	1	2
y	-5	-2	1	4	7

$y = 3x + 1$



passes vertical  
line test!

$m = \frac{\text{rise}}{\text{run}} = \frac{3}{1}$

for every "x"  
there is exactly  
one "y"

32. for every "x" there is exactly one "y", so, yes, it is a function.

$$\begin{array}{cc} x_1 & y_1 & x_2 & y_2 \\ (0, 80) & & (50, 110) & \\ \uparrow & \uparrow & \uparrow & \uparrow \\ & \text{y-intercept} & & \end{array}$$

$$\frac{110 - 80}{50 - 0} = \frac{30}{50} = \frac{3}{5}$$

$$y = \frac{3}{5}x + 80$$



Lesson 8.7 p. 451 # 11-16 all,  
17-27 odds, 28 + 29

11.  $f(x) = -3x + 1$

$$f(-1) = -3(-1) + 1$$

$$f(-1) = +3 + 1$$

$$\boxed{f(-1) = 4}$$

12.  $g(x) = 10x - 4$

$$g(5) = 10(5) - 4$$

$$g(5) = 50 - 4$$

$$\boxed{g(5) = 46}$$

13.  $f(x) = -3x + 1$

$$-17 = -3x + 1$$

$$\begin{array}{r} -1 \qquad \qquad -1 \\ \hline \end{array}$$

$$\begin{array}{r} -18 = -3x \\ \hline \end{array}$$

$$\begin{array}{r} -3 \qquad -3 \\ \hline \end{array}$$

$$\boxed{x = 6}$$

14.  $g(x) = 10x - 4$

$$31 = 10x - 4$$

$$\begin{array}{r} +4 \qquad +4 \\ \hline \end{array}$$

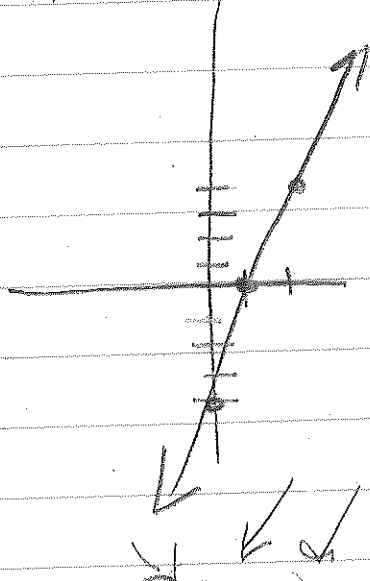
$$\boxed{x = 3\frac{1}{2}}$$

$$\begin{array}{r} 35 = 10x \\ \hline 10 \quad 10 \end{array}$$

$$x = \frac{35}{10} = 3\frac{5}{10} = \boxed{3\frac{1}{2}}$$



21.  $g(x) = 4x - 4$



23. origin =  $(0, 0)$   $f(x) = -8x - 2$   
 parallel means same slope so  
 $m = -8$   
 y intercept is @ the origin  
 so  $b = 0$

$$g(x) = -8x + 0$$

$$g(x) = -8x$$

25.  $g(-2) = 10$   
 $(-2, 10)$   
 $x_1 \quad y_1$

$g(0) = 0$   
 $(0, 0)$   
 $x_2 \quad y_2$  y-intercept

Slope:  $\frac{0 - 10}{0 - (-2)} = \frac{-10}{2} = -5$

$$g(x) = -5x + 0$$

$$g(x) = -5x$$

$$27. \quad \begin{matrix} x & y \\ r(-9) = & -7 \end{matrix}$$

$$\begin{matrix} x & y \\ r(0) = & -1 \end{matrix}$$

$$\begin{matrix} x_1 & y_1 \\ (-9, & -7) \end{matrix}$$

$$\begin{matrix} x_2 & y_2 \\ (0, & -1) \end{matrix}$$

→ ↑↑

y-intercept

$$\text{slope: } \frac{-1 - (-7)}{0 - (-9)} = \frac{6}{9} = \frac{2}{3}$$

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

$$28. \quad m(b) = 236b - 513$$

$$A) \quad b = 5 \text{ mm}$$

$$m(5) = 236(5) - 513$$

$$m(5) = 1180 - 513$$

$$m(5) = 667$$

$$\begin{array}{r} 236 \\ \times 5 \\ \hline 1180 \\ - 513 \\ \hline 667 \end{array}$$

Mass of the solid is  
About 667 grams

$$B) \quad \begin{array}{r} 1100 = 236x - 513 \\ + 513 \qquad \qquad + 513 \\ \hline \end{array}$$

$$\begin{array}{r} 1613 = 236x \\ 236 \quad 236 \end{array}$$

$$\begin{array}{r} 236 \overline{) 1613.0} \\ \underline{1416} \phantom{0} \\ 1970 \\ \underline{1888} \\ 820 \end{array}$$

$$x = 6.8 \text{ mm}$$

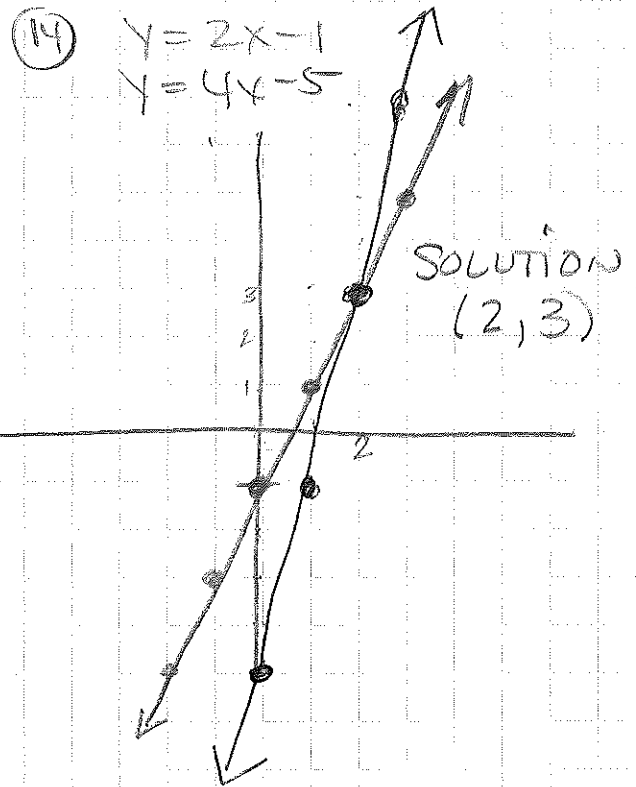
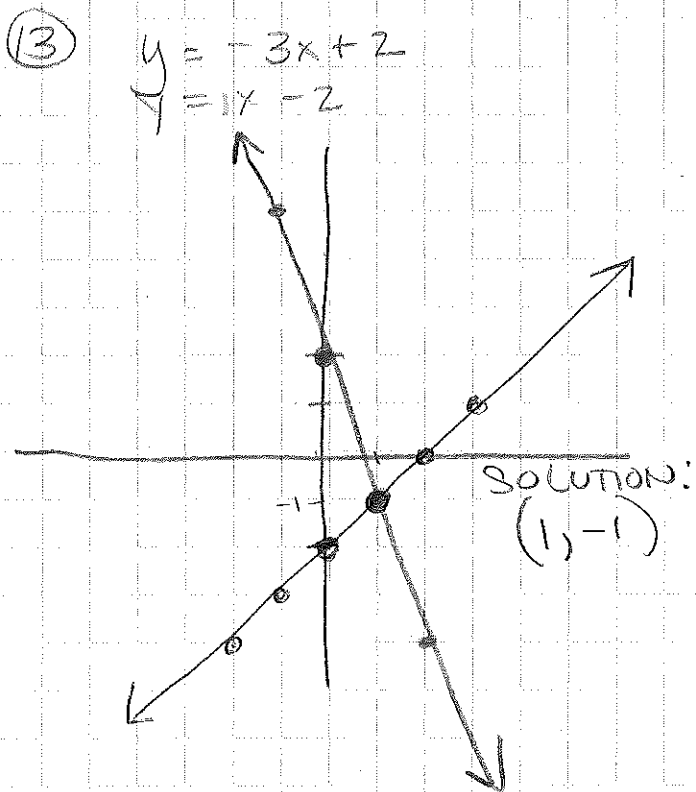
$$\begin{array}{r} 820 \\ - 708 \\ \hline \end{array}$$

P. 457 # 7, 8, 13, 14, 15, 17, 21, 23, 25 (a & c only)

Lesson 8.8

⑦  $(0, -2)$   
 $3(0) - 2(-2) = 4$   
 $0 + 4 = 4 \checkmark$   
 $-2(0) - (-2) = -2$   
 $0 + 2 = -2 \times$   
 NOT A SOLUTION!

⑧  $(4, 2)$   
 $2 = -5(4) + 22$   
 $2 = -20 + 22$   
 $2 = 2 \checkmark$   
 $2 = 8(4) - 30$   
 $2 = 32 - 30$   
 $2 = 2 \checkmark$   
 SOLUTIONS!



⑮  $2x + 4y = 8$   
 $3x + 6y = 12$

$2x + 4y = 8$        $3x + 6y = 12$   
 $-2x$                        $-2x$        $-3x$        $-3x$

$$\frac{4y}{4} = \frac{-2x + 8}{4}$$

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

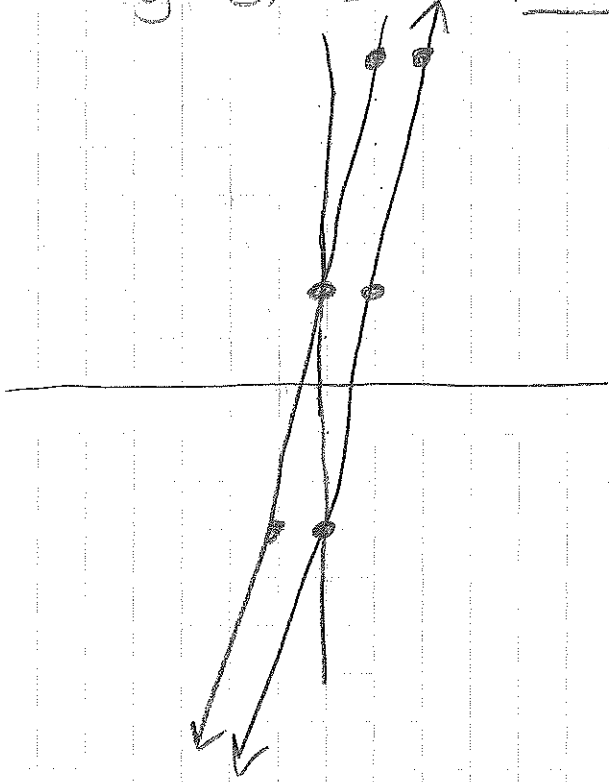
$$\frac{6y}{6} = \frac{-3x + 12}{6}$$

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

Same line!

INFINITE SOLUTIONS!

①⑦  $y = 5x - 3$   
 $y = 5x + 2$  → Same Slope  
NO SOLUTION!



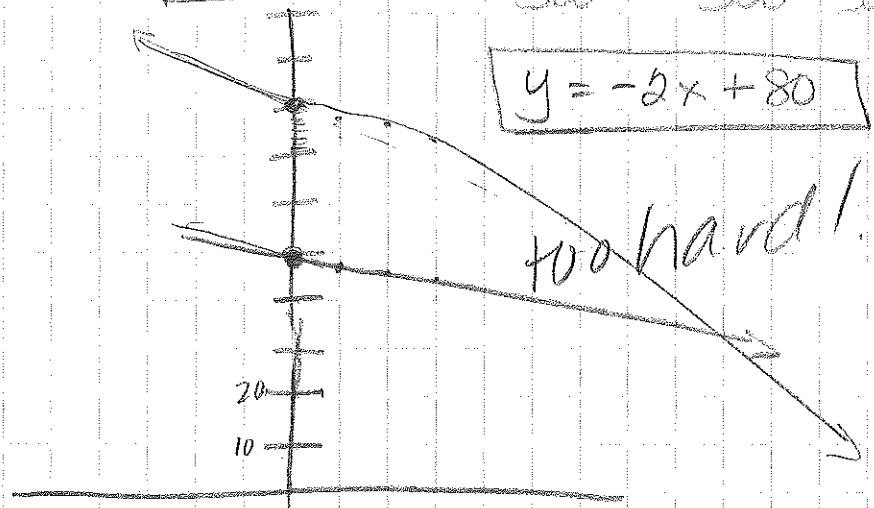
②③  $x = \text{newspaper}$   
 $y = \text{radio}$

$x + y = 50$   
 $600x + 300y = 24000$

$x + y = 50$   
 $-x$   
 $y = -x + 50$

$600x + 300y = 24000$   
 $-600x$   
 $\frac{300y}{300} = \frac{-600x + 24000}{300}$

$y = -2x + 80$



$-x + 50 = -2x + 80$   
 $+2x$   
 $x + 50 = 80$

$-50$   
 $x = 30$

$x = 30$

$y = -30 + 50$

$y = 20$

30 Newspapers  
 20 radio

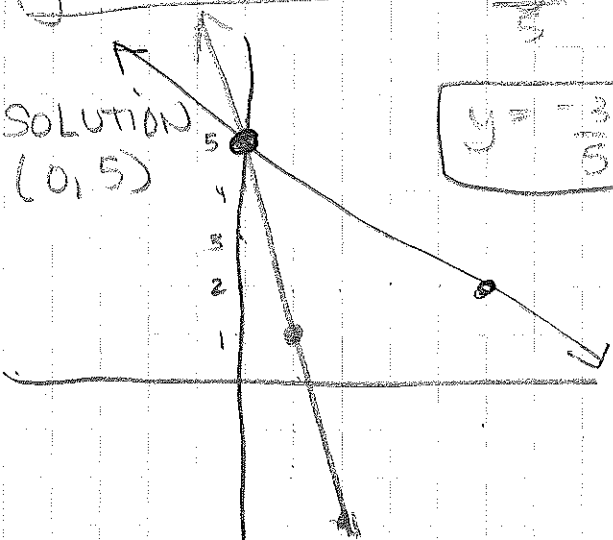
②①  $4x + y = 5$   
 $3x + 5y = 25$

$4x + y = 5$   
 $-4x$   
 $y = -4x + 5$

$3x + 5y = 25$   
 $-3x$   
 $5y = -3x + 25$

$\frac{5y}{5} = \frac{-3x + 25}{5}$

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



$$\textcircled{25} \text{ inkjet} = 0.15x + 100$$

$$y = 0.15x + 100$$

$\textcircled{A}$

$$\text{laser} = 0.03x + 400$$

$$y = 0.03x + 400$$

$$\begin{array}{r} 0.15x + 100 = 0.03x + 400 \\ -100 \qquad \qquad -100 \\ \hline \end{array}$$

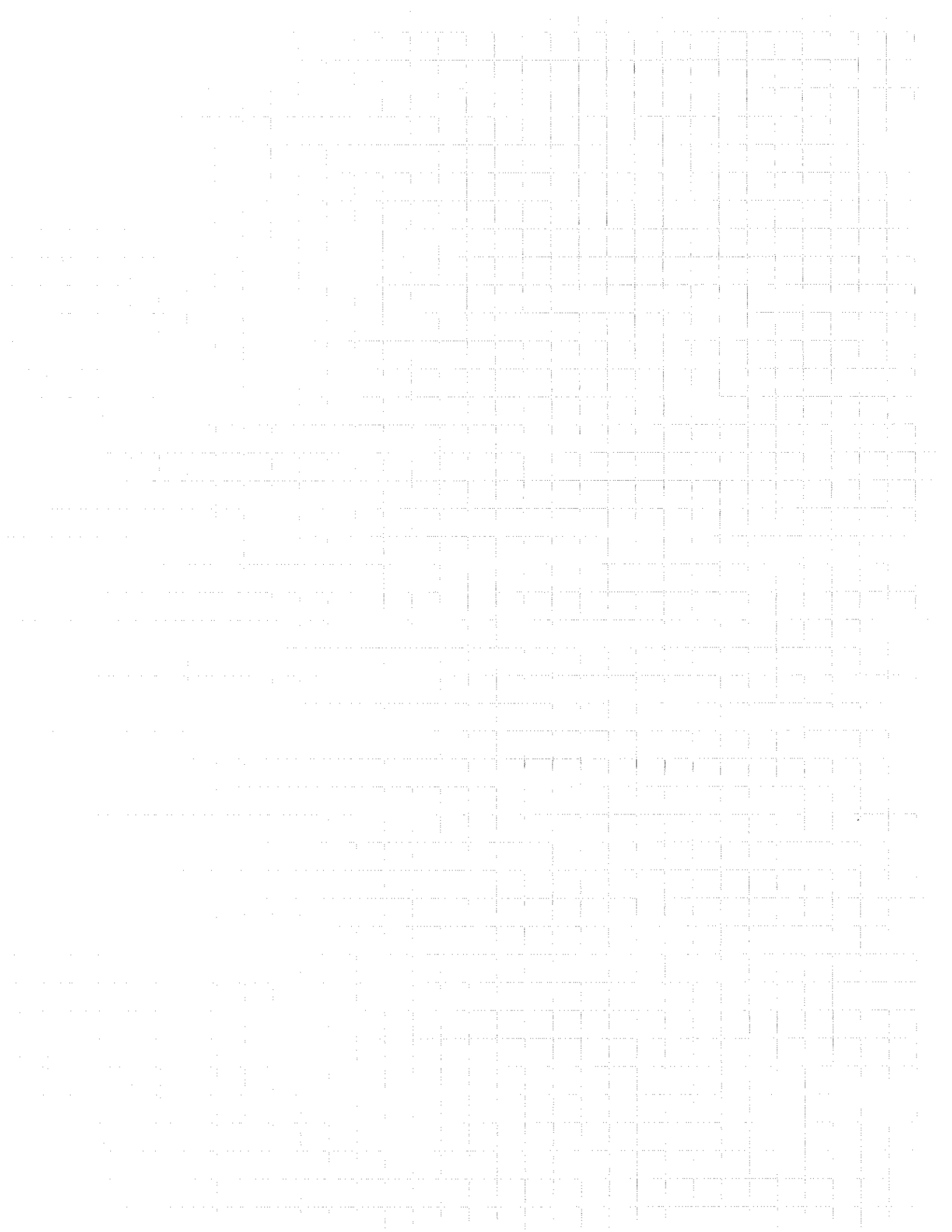
$\textcircled{C}$

$$\begin{array}{r} 0.15x = 0.03x + 300 \\ -0.03x \quad -0.03x \\ \hline \end{array}$$

$$\begin{array}{r} 0.12x = 300 \\ \hline 0.12 \quad 0.12 \end{array}$$

$$\begin{array}{r} 2500. \\ 0.12 \overline{) 30000.} \\ \underline{-24} \\ 60 \end{array}$$

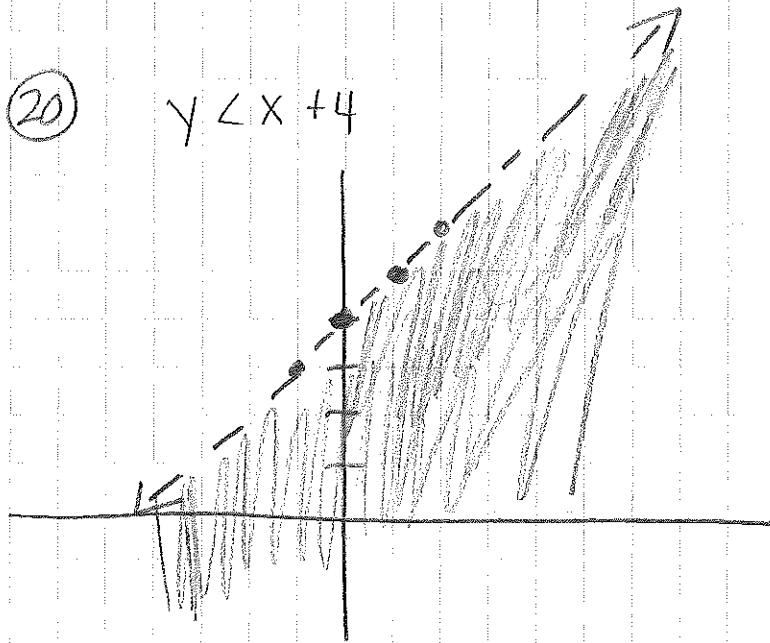
$$\boxed{x = 2500 \text{ pages}}$$



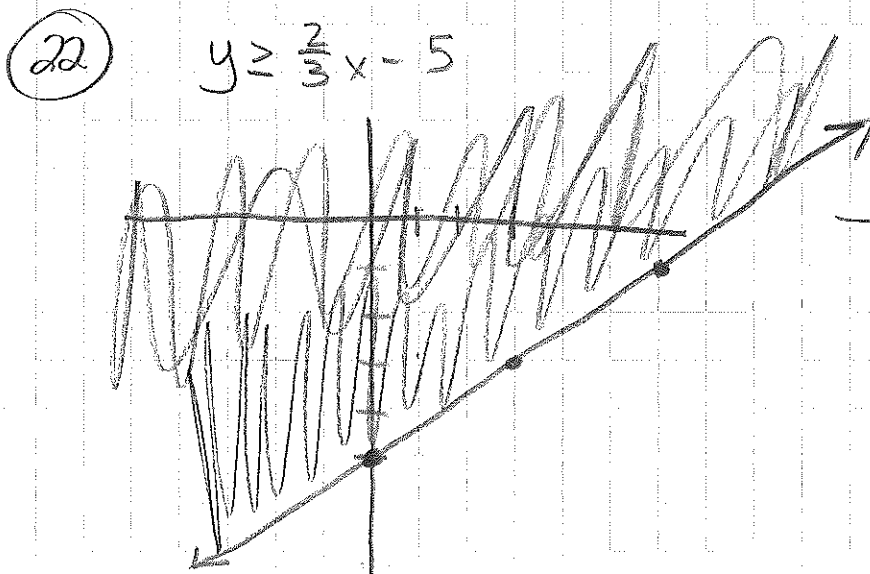
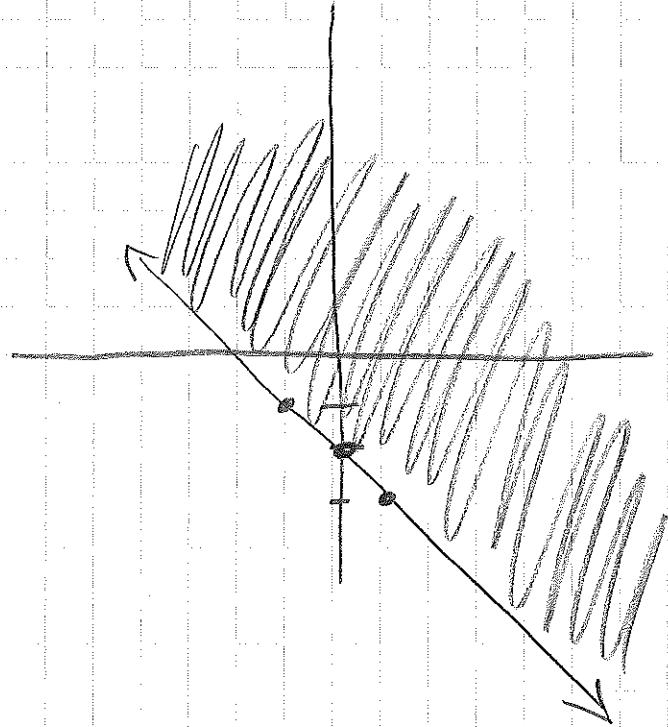


(1, 4)  
 ①⑥  $y \geq -7x + 9$   
 $4 \geq -7(1) + 9$   
 $4 \geq -7 + 9$   
 $4 \geq 2$  TRUE!

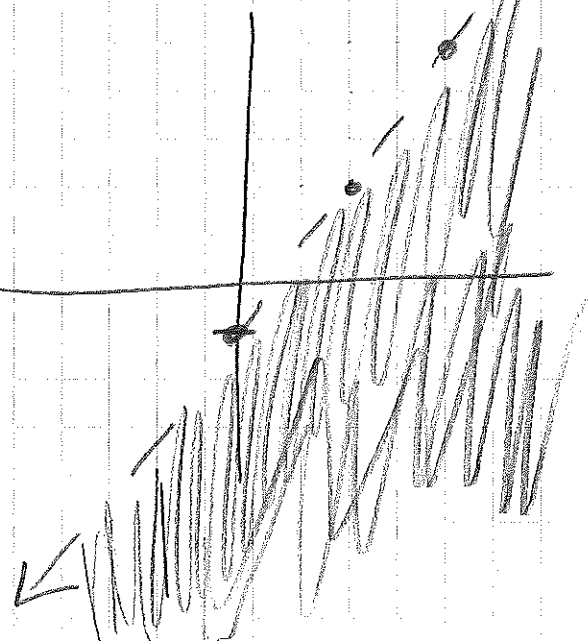
(8, -9)  
 ①⑧  $x \leq 6$   
 $8 \leq 6$  NOT TRUE!



②④  $x + y \geq -2$   
 $y \geq -x - 2$

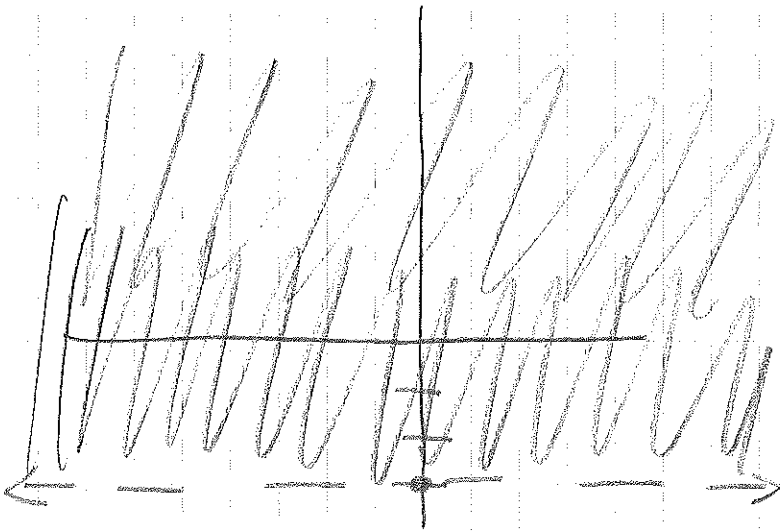


②⑥  $3x - 2y > 2$   
 $\frac{-2y}{-2} > \frac{-3x + 2}{-2}$   
 $y < \frac{3}{2}x - 1$



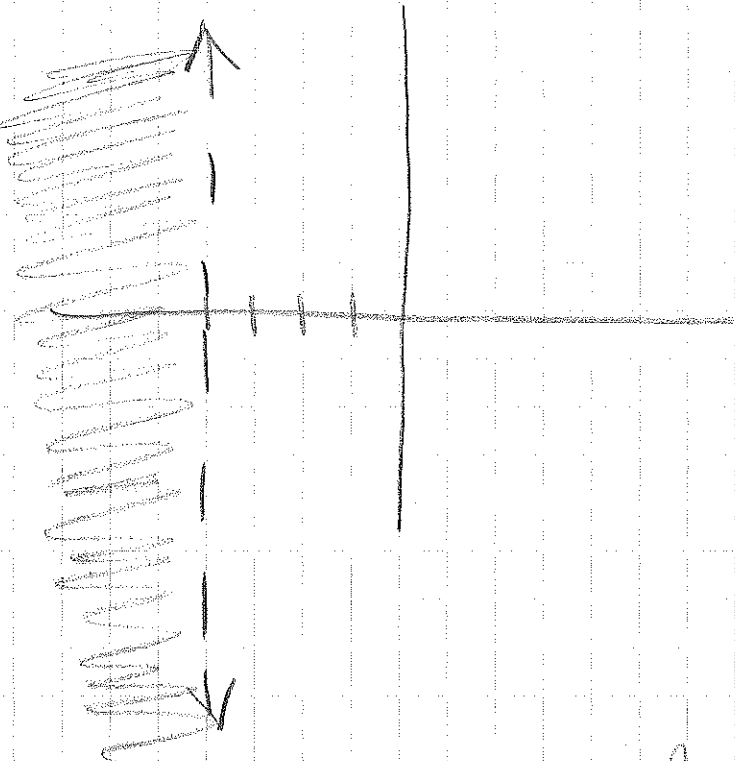
28

$$y > -3$$



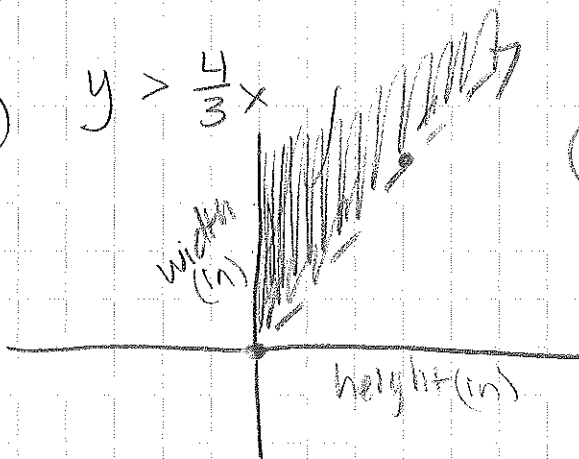
30

$$x < -4$$



33

$$y > \frac{4}{3}x$$



35 (0, -4)

A

$$y < x + 3$$

$$-4 < 0 + 3$$

$$-4 < 3 \quad \text{True}$$

$$y \geq 2x - 3$$

$$-4 \geq 0 - 3$$

$$-4 \geq -3 \quad \text{NOT TRUE}$$

NOT A SOLUTION.

B (1, 3)

$$3 < 1 + 3$$

$$3 < 4 \quad \text{TRUE}$$

$$3 \geq -2(1) - 3$$

$$3 \geq -2 - 3$$

$$3 \geq -5 \quad \text{TRUE}$$

Yes, A Solution

C

(-2, 1)

$$1 < -2 + 3$$

$$1 < 1 \quad \text{NOT TRUE}$$

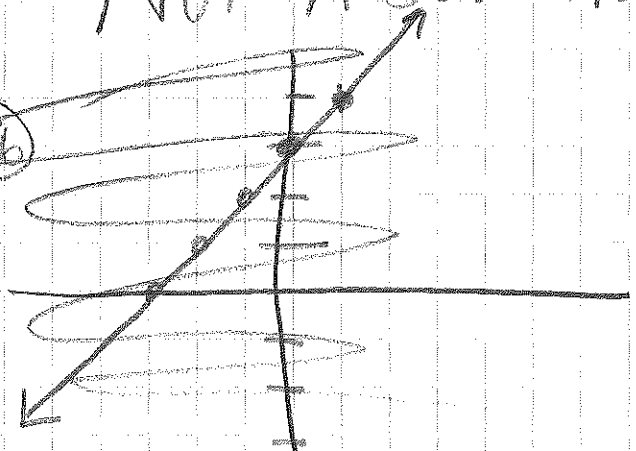
$$1 \geq -2(-2) - 3$$

$$1 \geq +4 - 3$$

$$1 \geq 1 \quad \text{TRUE}$$

NOT A SOLUTION

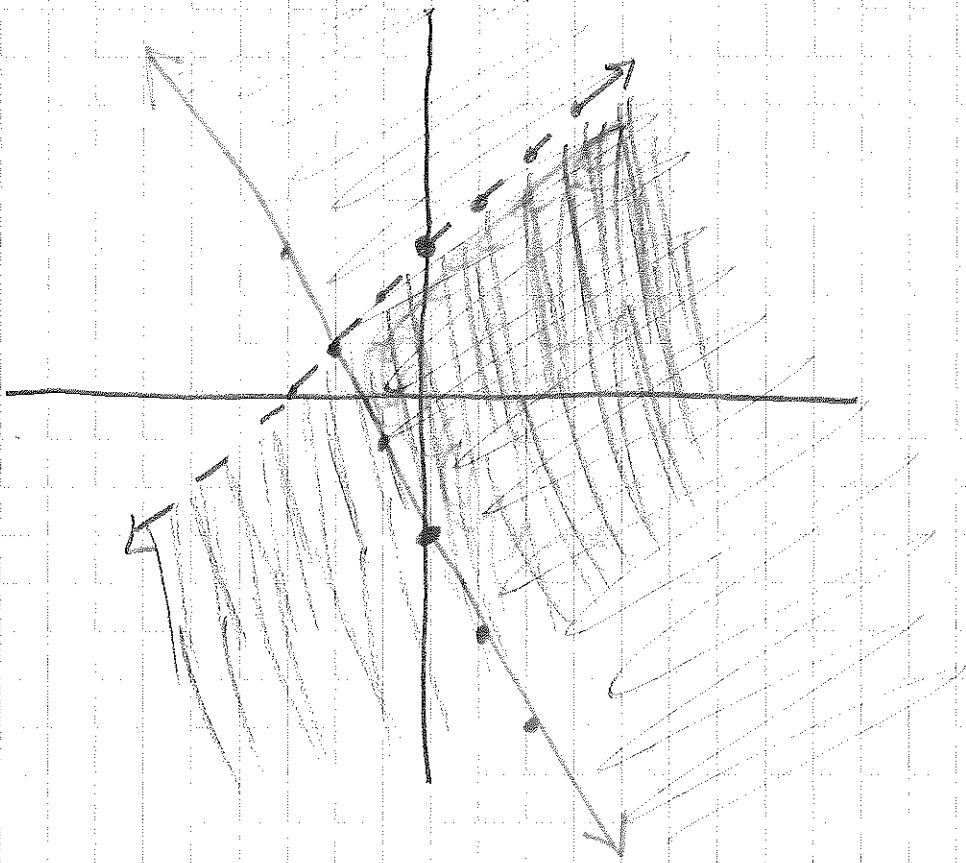
36



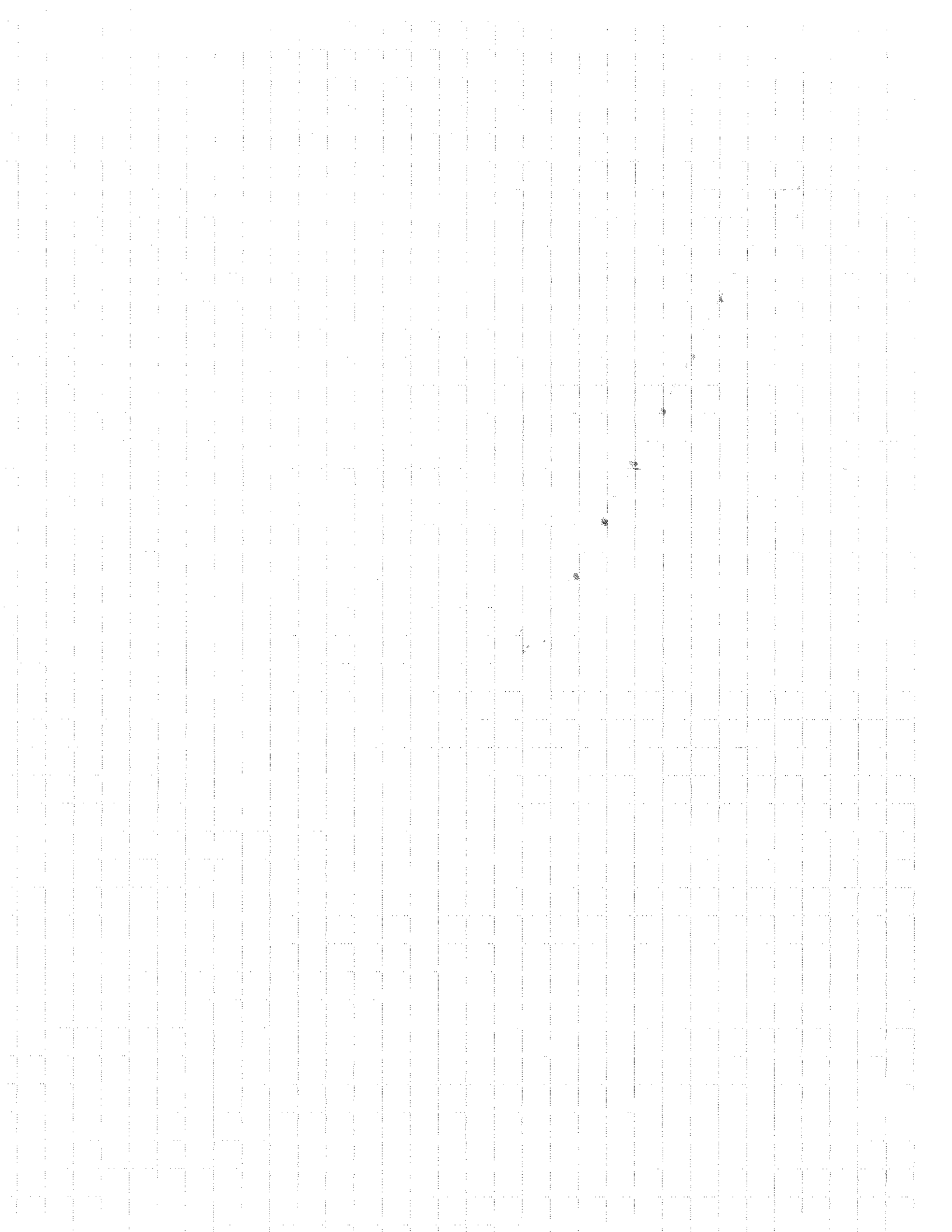
(36)

$$y < x + 3$$

$$y \geq -2x - 3$$



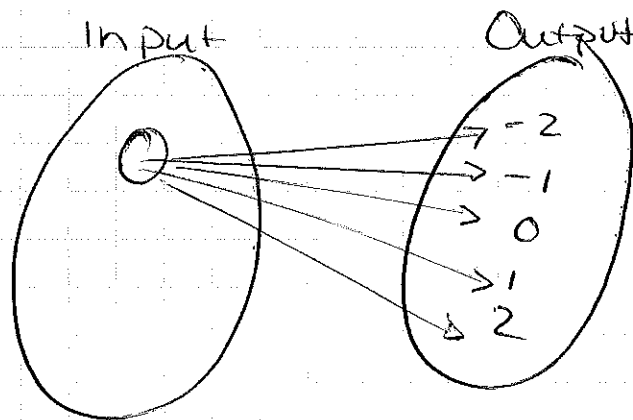
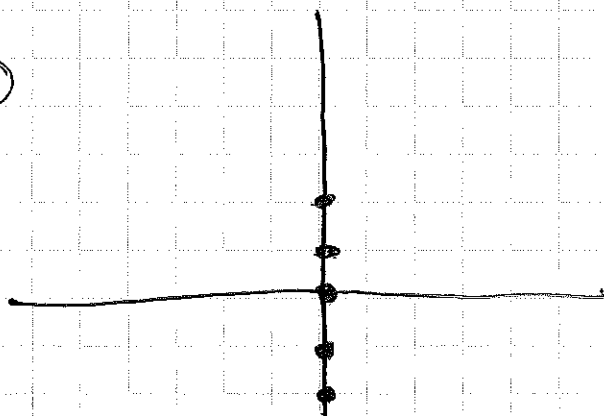
(37) region is below and to the right  
of  $y = x + 3$  & above & to the right of  
 $y = -2x - 3$ .



p. 470 #1-25 odds

End of Chapter Quiz

①



NOT A FUNCTION!!

③

$$y = 7 - 2x$$

$$\begin{aligned} -5 &= 7 - 2(6) \\ -5 &= 7 - 12 \\ -5 &= -5 \quad \checkmark \end{aligned}$$

$$\begin{aligned} 3 &= 7 - 2(2) \\ 3 &= 7 - 4 \\ 3 &= 3 \quad \checkmark \end{aligned}$$

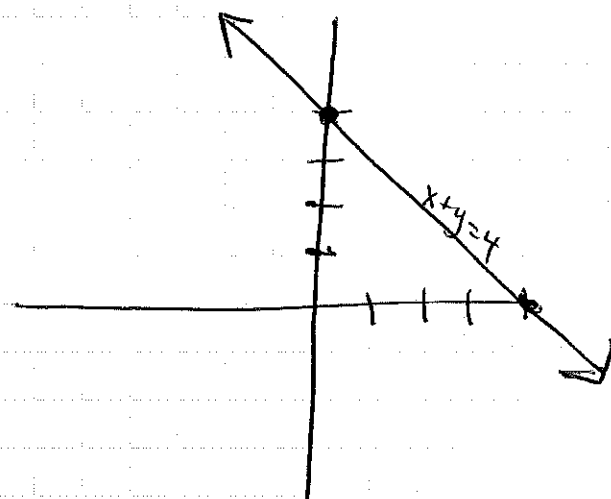
$(5, 1)$  NO!  
 $(6, -5)$  YES!  
 $(2, 3)$  YES!

$$\begin{aligned} 1 &= 7 - 2(5) \\ 1 &= 7 - 10 \\ 1 &\neq -3 \end{aligned}$$

⑤

$$\begin{aligned} x + y &= 4 \\ 0 + y &= 4 \\ x + 0 &= 4 \end{aligned}$$

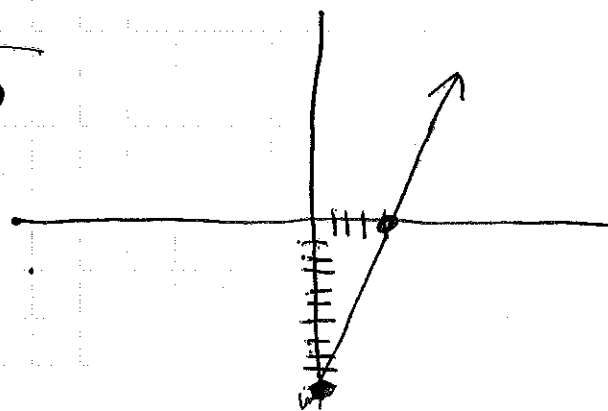
x	y
0	4
4	0



⑦

$$\begin{aligned} y &= \frac{5}{2}x - 10 \\ y &= -10 \\ 0 &= \frac{5}{2}x - 10 \\ +10 & \quad +10 \\ \left(\frac{2}{5}\right)\frac{0}{1} &= \frac{5}{2}x \left(\frac{2}{5}\right) \end{aligned}$$

x	y
0	-10
4	0



x = 4



$$\textcircled{9} \quad \frac{y_2 - y_1}{x_2 - x_1} \quad \begin{matrix} (8, -3) \\ (10, 7) \end{matrix}$$

$$\frac{7 - (-3)}{10 - (8)} = \frac{10}{2} = 5$$

$$m = 5$$

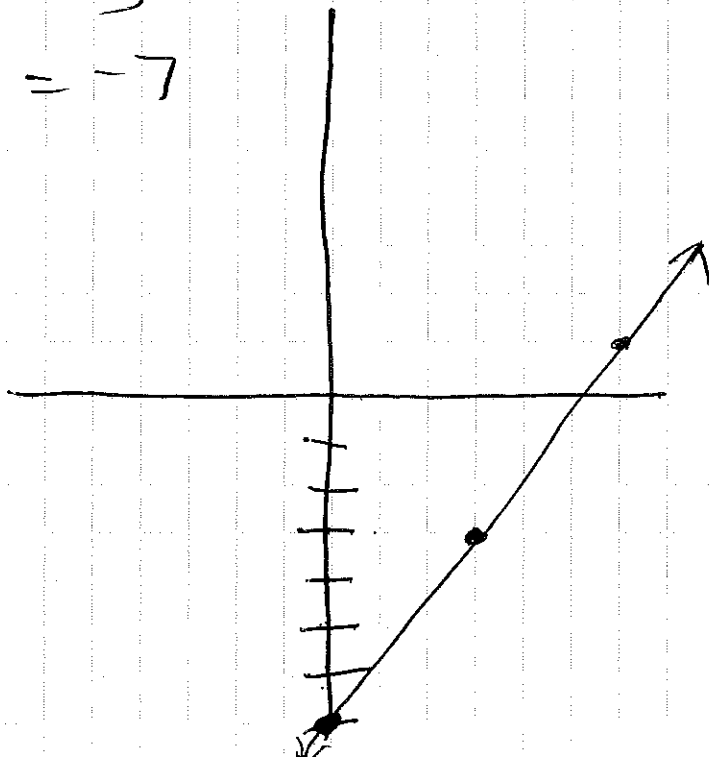
$$\textcircled{11} \quad \frac{y_2 - y_1}{x_2 - x_1} \quad \begin{matrix} (-2, 0) \\ (-2, 5) \end{matrix}$$

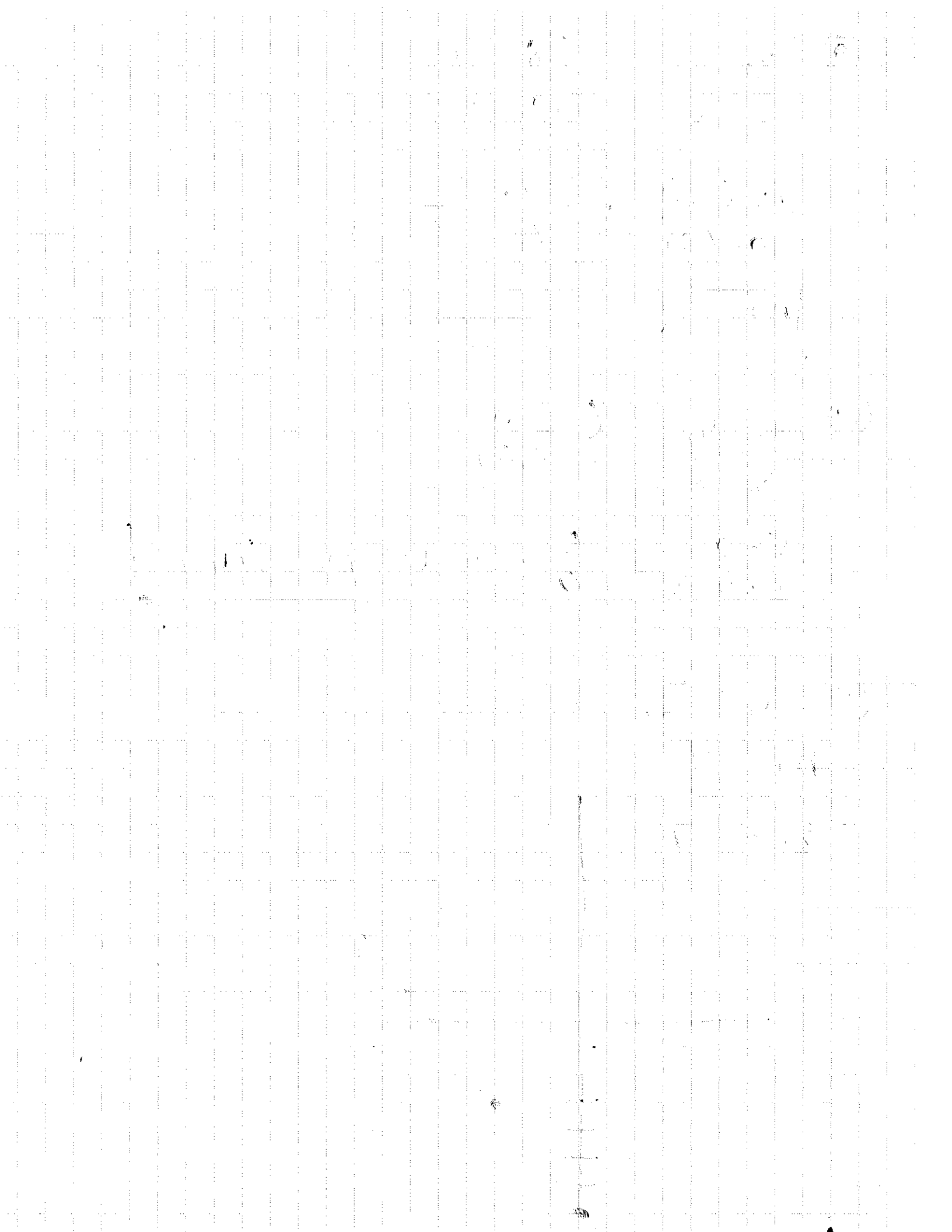
$$\frac{5 - 0}{-2 - (-2)} = \frac{5}{0} = \underline{\underline{\text{UNDEFINED!}}}$$

$$\textcircled{13} \quad y = \frac{4}{3}x - 7$$

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

$$b = -7$$





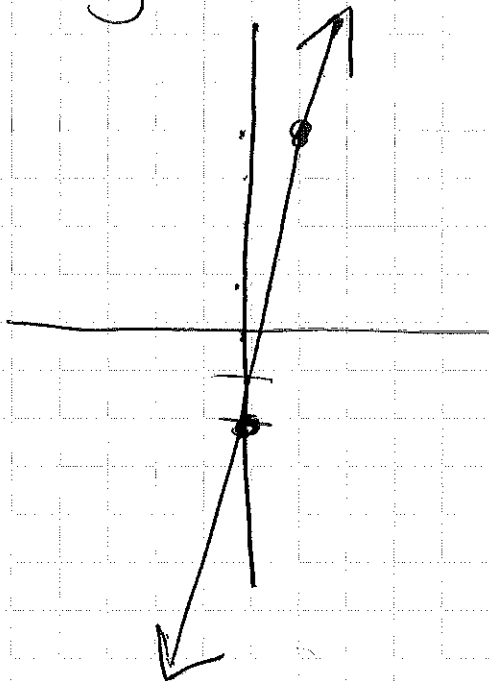


⑮  $-6x + y = -2$

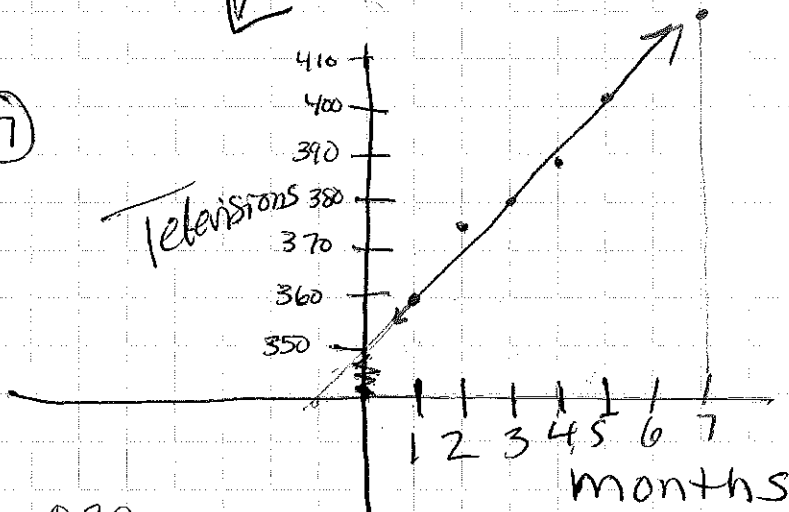
$y = 6x - 2$

$m = 6$

$b = -2$



⑰



$m = \frac{\uparrow 20}{\rightarrow 2} = 10$

$y = 10x + 350$

⑱ 7 mos  $\approx$  420 televisions

⑲  $g(0) = -6$

$g(15) = -9$

$m = \frac{-9 - (-6)}{15 - 0}$

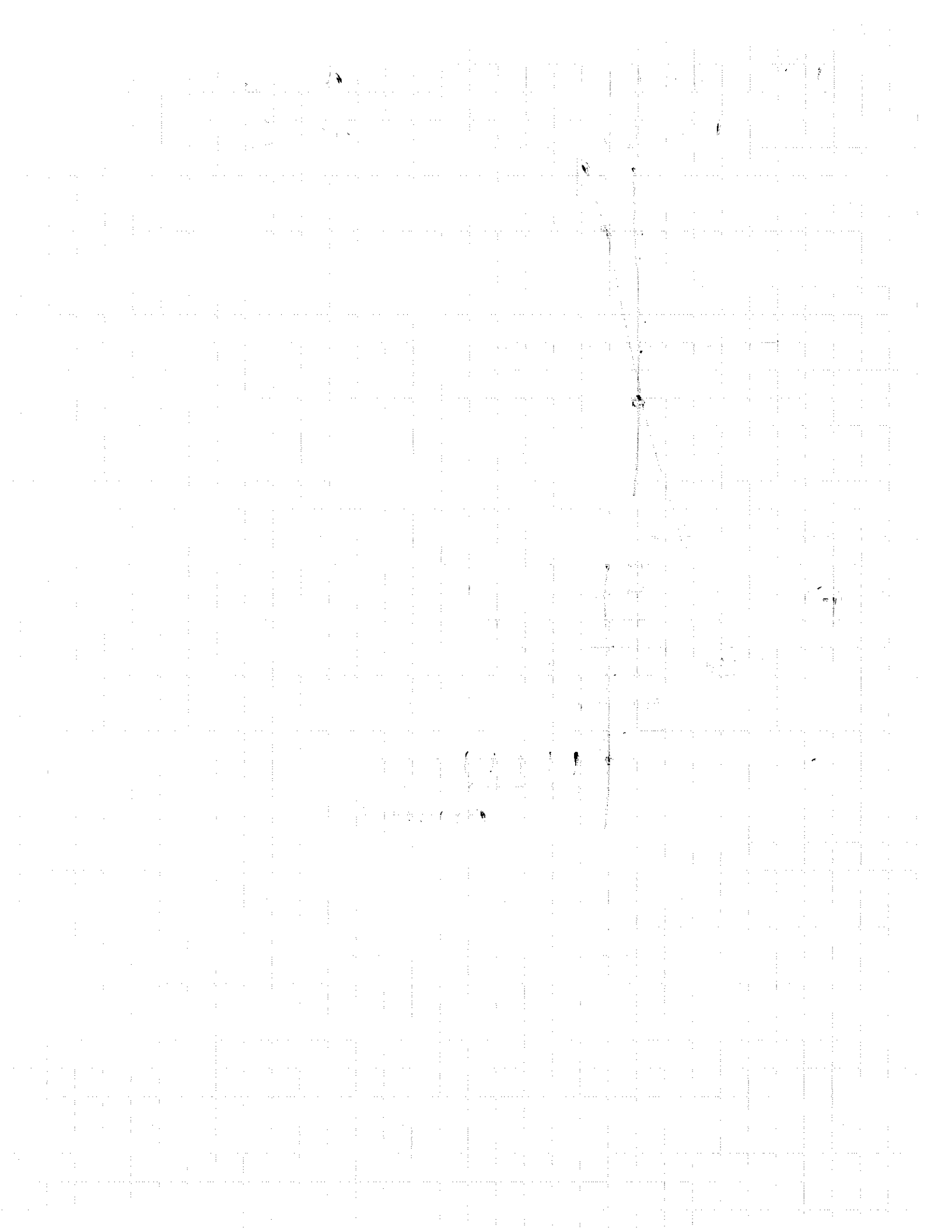
$(0, -6)$

$(15, -9)$

$m = \frac{-3}{15} = -\frac{1}{5}$

y-intercept  $\rightarrow$

$g(x) = -\frac{1}{5}x - 6$



21

$$x + 5y = -10$$

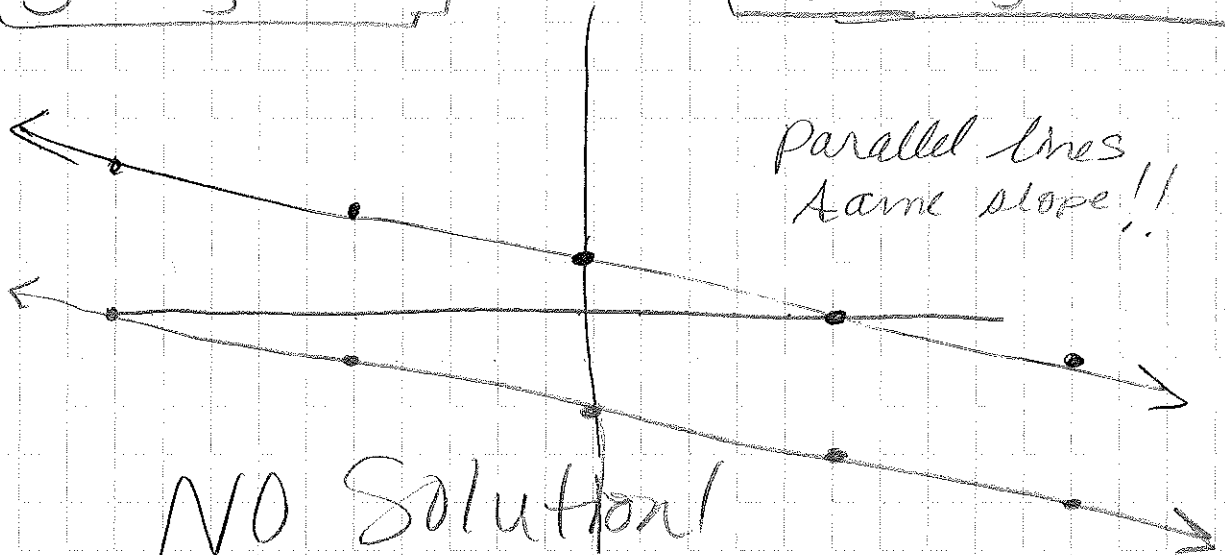
$$\frac{5y}{5} = \frac{-x - 10}{5}$$

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

$$x + 5y = 5$$

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

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



NO Solution!

23

$$2x - y = 5$$

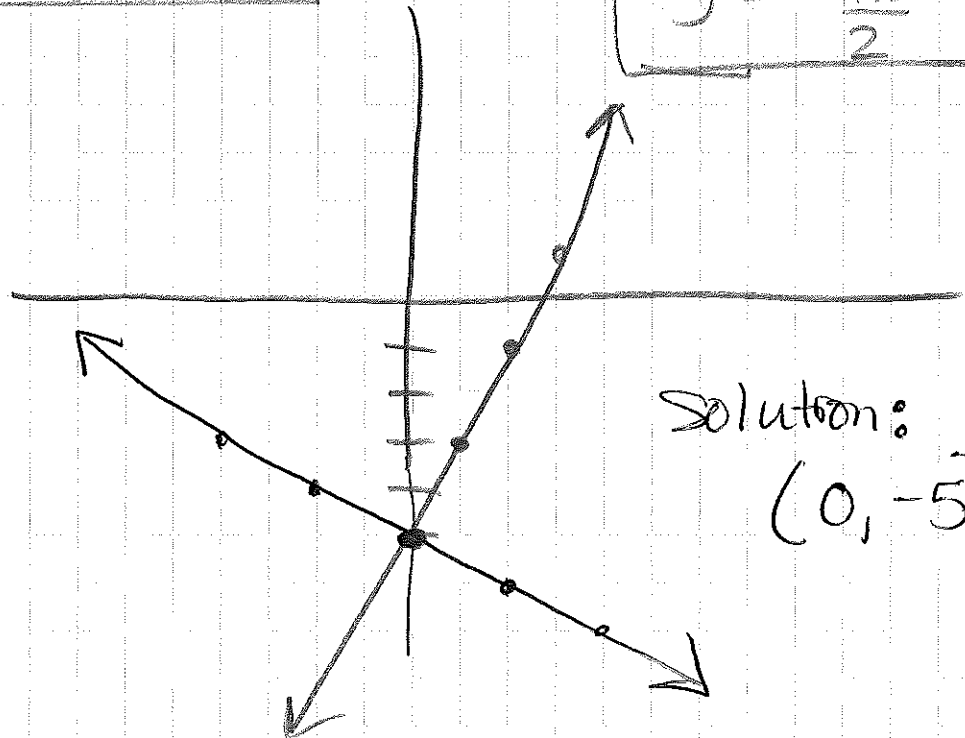
$$\frac{-y}{-1} = \frac{-2x + 5}{-1}$$

$$y = 2x - 5$$

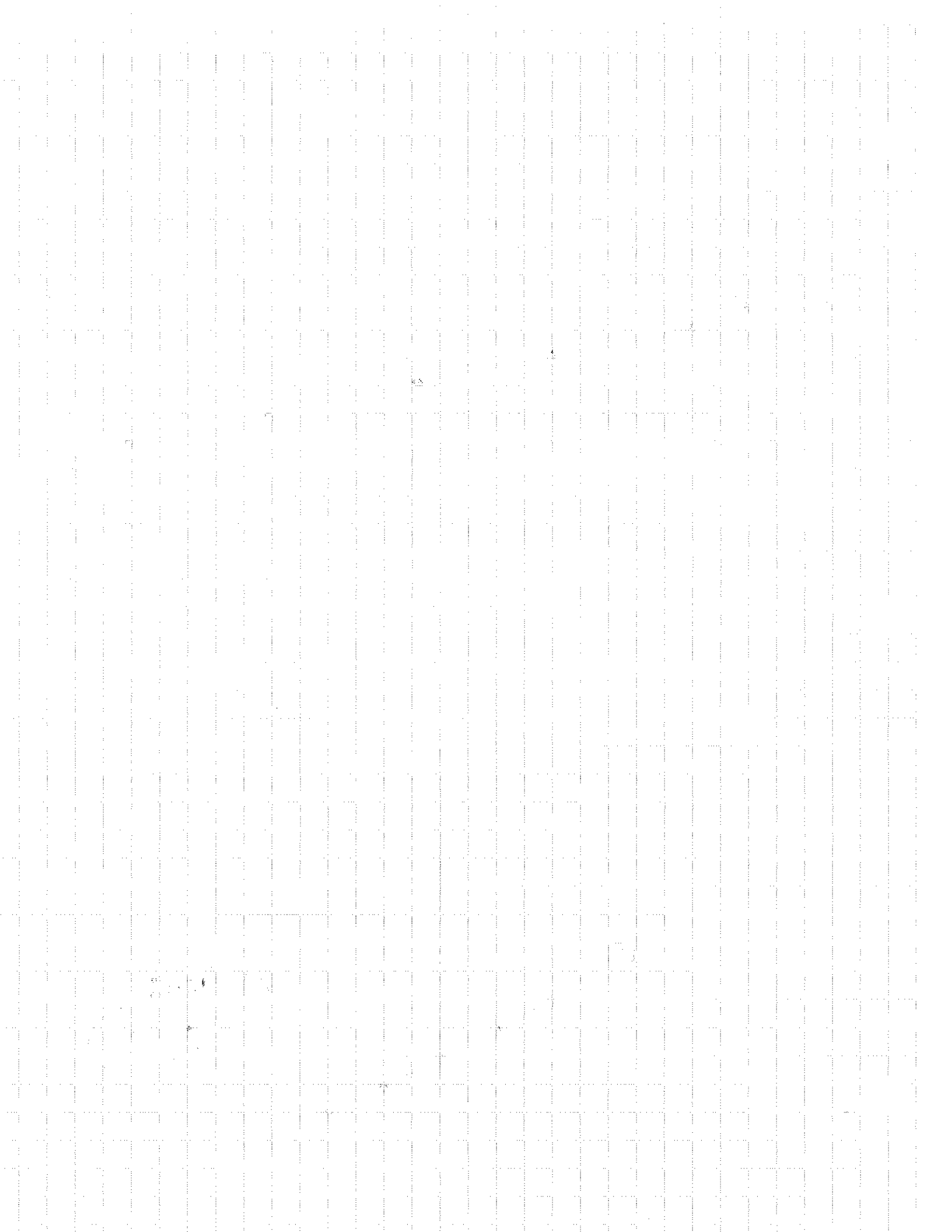
$$x + 2y = -10$$

$$\frac{2y}{2} = \frac{-x - 10}{2}$$

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



Solution:  
(0, -5)



25

$$y \leq 3x - 5$$

