Curriculum Outcomes:

(PR1) Generalize a pattern arising from a problem-solving context using linear equations and verify by substitution.

(PR2) Graph linear relations, analyze the graph and interpolate or extrapolate to solve problems.

Student Friendly: Looking at a graph or t-table and determining if they are linear or non-linear or discrete or continuous

Use a table of values to graph the following.

hint: must use your equation to determine the change in your x values

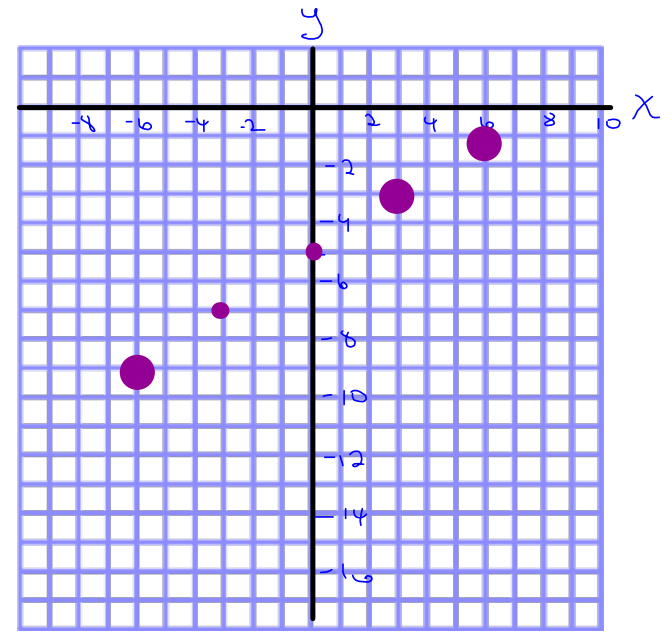
$y = \frac{2}{3}x - 5$

$y = \frac{\Delta y}{\Delta x} x \pm \#$

$\Delta x = 3$ $\Delta y = 2$

x	y
-6	-9
-3	-7
0	-5
3	-3
6	-1

+2 +2 +2



$x = -3$

$y = \frac{2}{3}(-3) - 5$

$y = \frac{-6}{3} - 5$

$y = -2 - 5$

$y = -7$

$x = 0$

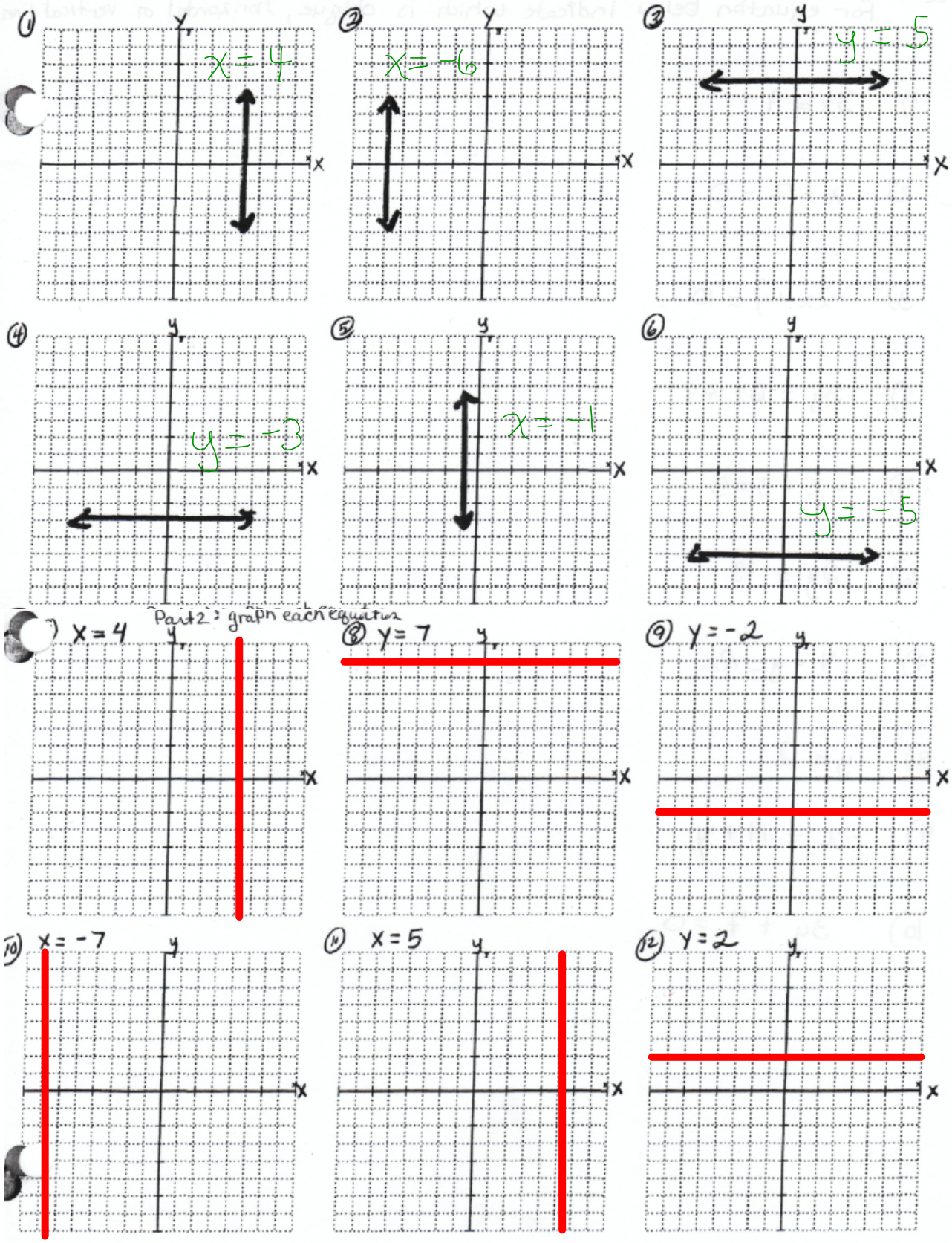
$y = \frac{2}{3}(0) - 5$

$y = 0 - 5$

$y = -5$

Part 1: Write the equation for each line

Section 4.3



Parts

For equation below indicate which is oblique, horizontal or vertical lines.

1) $3x = 9$ V

2) $x + 7 = 0$ V

3) $-2x + y = 10$ O

4) $3y = 6x + 9$ O

5) $-x + 3 = 5$ V

6) $2y = 18$ H

7) $7 + y = 2x$ O

8) $y = 2$ H

9) $-x = 14 + y$ O

10) $3y + 7 = 0$ H

Graphing an Equation in the Form ax + by = c

Method 1

For the equation 2x + 5y = 15:

a) Rearrange first => $y = \frac{\Delta y}{\Delta x} x \pm b$

$$2x + 5y = 15$$

$$2(x) + 5y = 15 \quad -2x \quad -2x$$

$$5y = -2x + 15$$

$$\frac{5y}{5} = \frac{-2x}{5} + \frac{15}{5}$$

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

Hardest

$y = \frac{\Delta y}{\Delta x} x \pm b$

$\Delta x = 5$ $\Delta y = -2$

x	y	
-5	5	-2
0	3	-2
5	1	-2
10	-1	

$x = -5$

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

$y = \frac{10}{5} + 3$

$y = 2 + 3$

$y = 5$

$x = 0$

$y = \frac{-2}{5}(0) + 3$

$y = 0 + 3$

$y = 3$

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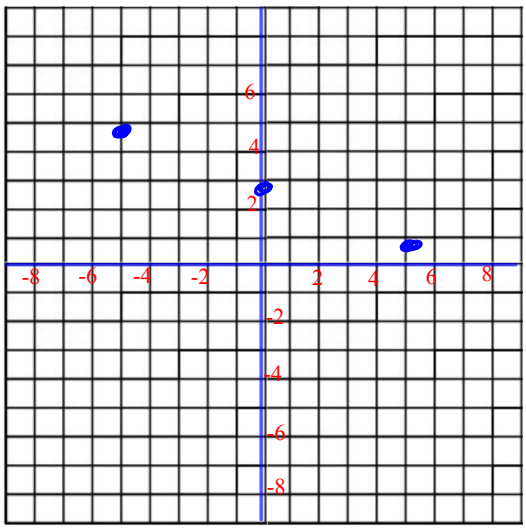
b) Graph the equation



$\Delta x = 5$ $\Delta y = -2$

x	y	
-5	5	-2
0	3	-2
5	1	-2
10	-1	

Graphing an Equation in the Form ax + by = c

For the equation $2x - y = 6$

Make a table of values, and then graph.
Show all work

$y = \frac{\Delta y}{\Delta x} x \pm \#$

$2x - y = 6$ (−2x, −2x)

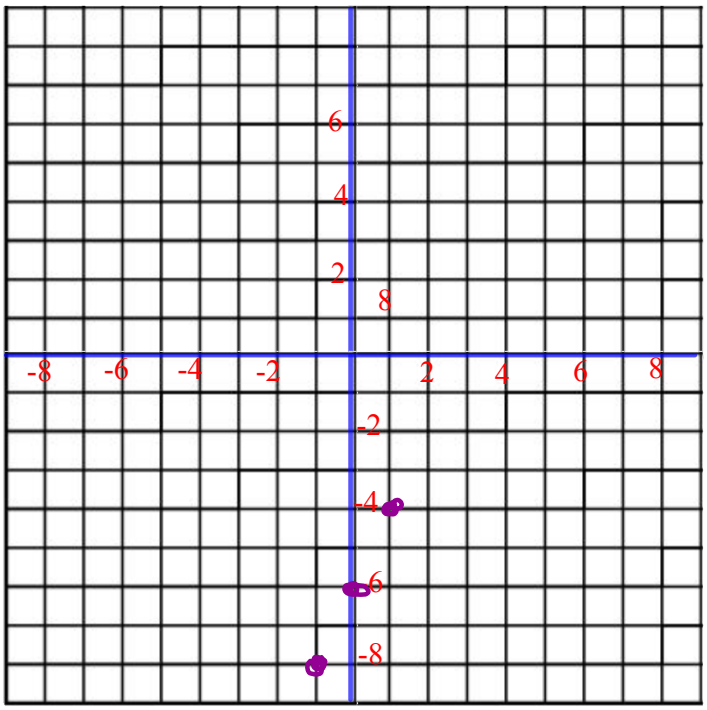
$\frac{-y}{-1} = \frac{-2x + 6}{-1}$

$y = \frac{2x - 6}{1}$

$y = \frac{\Delta y}{\Delta x} x \pm \#$

$x = -1$
$y = 2(-1) - 6$
$y = -2 - 6$
$y = -8$

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



$\Delta x = 1$ $\Delta y = 2$

x	y
−1	−8
0	−6
1	−4

Class/Homework

Worksheet

PAGE 178 - 180

4,5, 6,7

#8, #9, # 10ai,

Attachments

Section 4.3 Worksheet.pdf