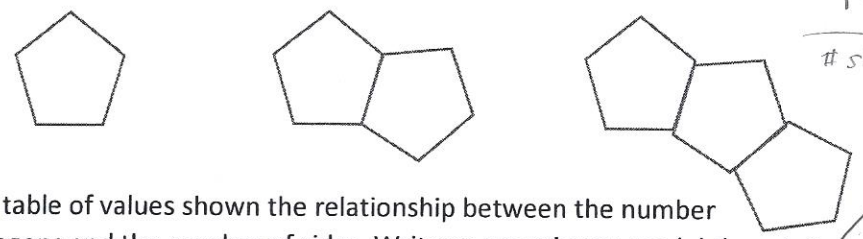
Math 9: Linear Relations Final Exam Review

- **Representing Patterns**
  a. Describe the relationship between the number of regular pentagons and the number of sides in the pattern.



# pentagons (p)	1	2	3
# sides (s)	5	8	11

$s = 3p + 2$

Make a table of values shown the relationship between the number of pentagons and the number of sides. Write an equation to model the relation. How many sides would a shape with 12 pentagons have? How many pentagons are needed to make a figure of 29 sides?

38 sides

9 pentagons.

  b. What is the linear equation between the values in the table?

x	0	1	2	3
y	5	8	11	14

$y = 3x + 5$

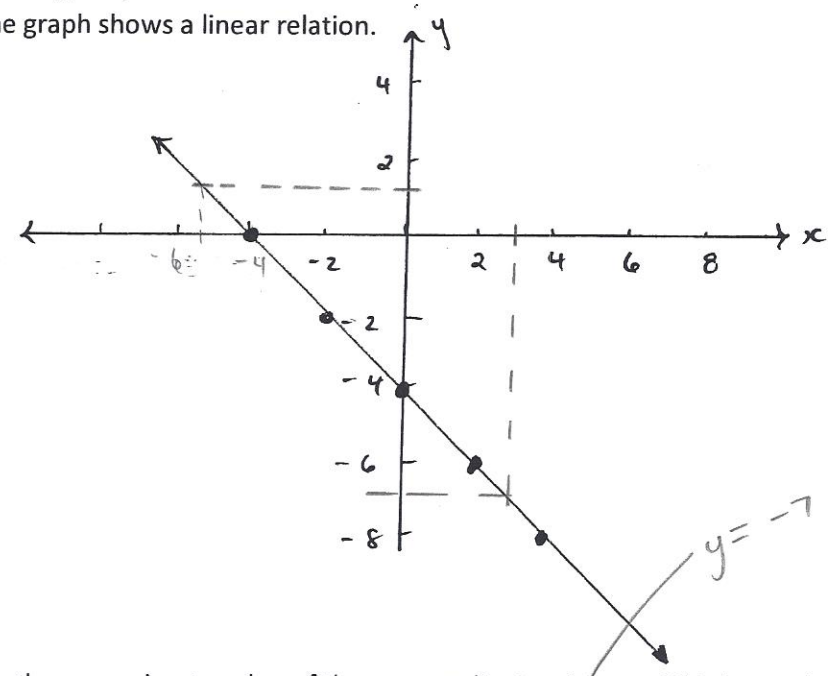
  c. A company rents a banquet hall that charges a flat rate of $1000 and $50 every hour the hall is used. Create a table of values to show this relationship. Develop an equation to determine the cost to use the hall. What is the cost to use the hall for 3.5 hours? If the company had a budget of $4075, how many hours to the nearest hour could they rent the hall?

$C = 50h + 1000$

$3.5h \Rightarrow C = \$1175$

$4075 \Rightarrow h = 61.5$

- **Interpreting Graphs**
  a. The graph shows a linear relation.



What is the approximate value of the y – coordinate when x = 3? What is the approximate value of the x – coordinate when y = 1?

$x = -5$

b. Apples cost $1.25 per 1000g. Plot the data. From the graph approximate how much ~~6050 g~~ 6500g will cost? From the graph approximate how many grams of apples you can purchase for $12.00. See Graph Paper 6050g ≈ $8.13 $12 ≈ 9750

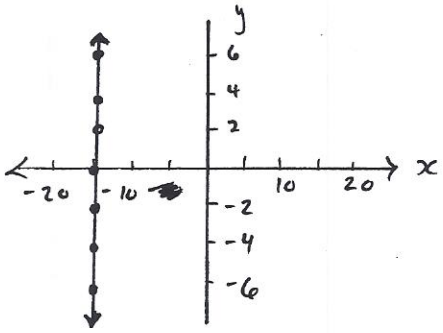
- **Graphing Linear Equations**

a. Create a table of values and a linear equation to represent the table of values.

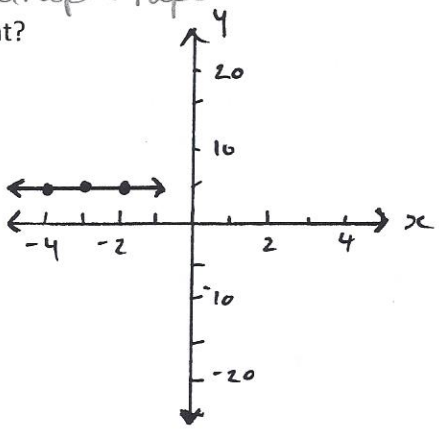
x	-3	-2	-1	0	1	2	3
y	-5	-3	-1	1	3	5	7

See Graph Paper

b. What linear equation does each graph represent?



$x = -15$



$y = 5$

Questions to Review

Chapter 6 Get Ready

Page 217 # 4 – 10
218 # 11 – 15, 17
226 # 4 – 11
228# 12 – 18
239 #4 – 12
240# 7a, 11b, 13 – 17

Linear Relations Assignment

Linear Relations Test

Data Analysis Questions to Review

Chapter 11 Get Ready

Page 419 #4 – 8
420 # 9 – 12, 14
426 #3 – 7

Data Analysis Assignment 1

Data Analysis Quiz

Data Analysis Test

Date: _____

0.5 Centimetre Grid Paper

Intreputing Graphs

b)

Cost of Apples

16.25
13.75
12.75
11.25
8.75
7.50
6.25
3.75
1.25

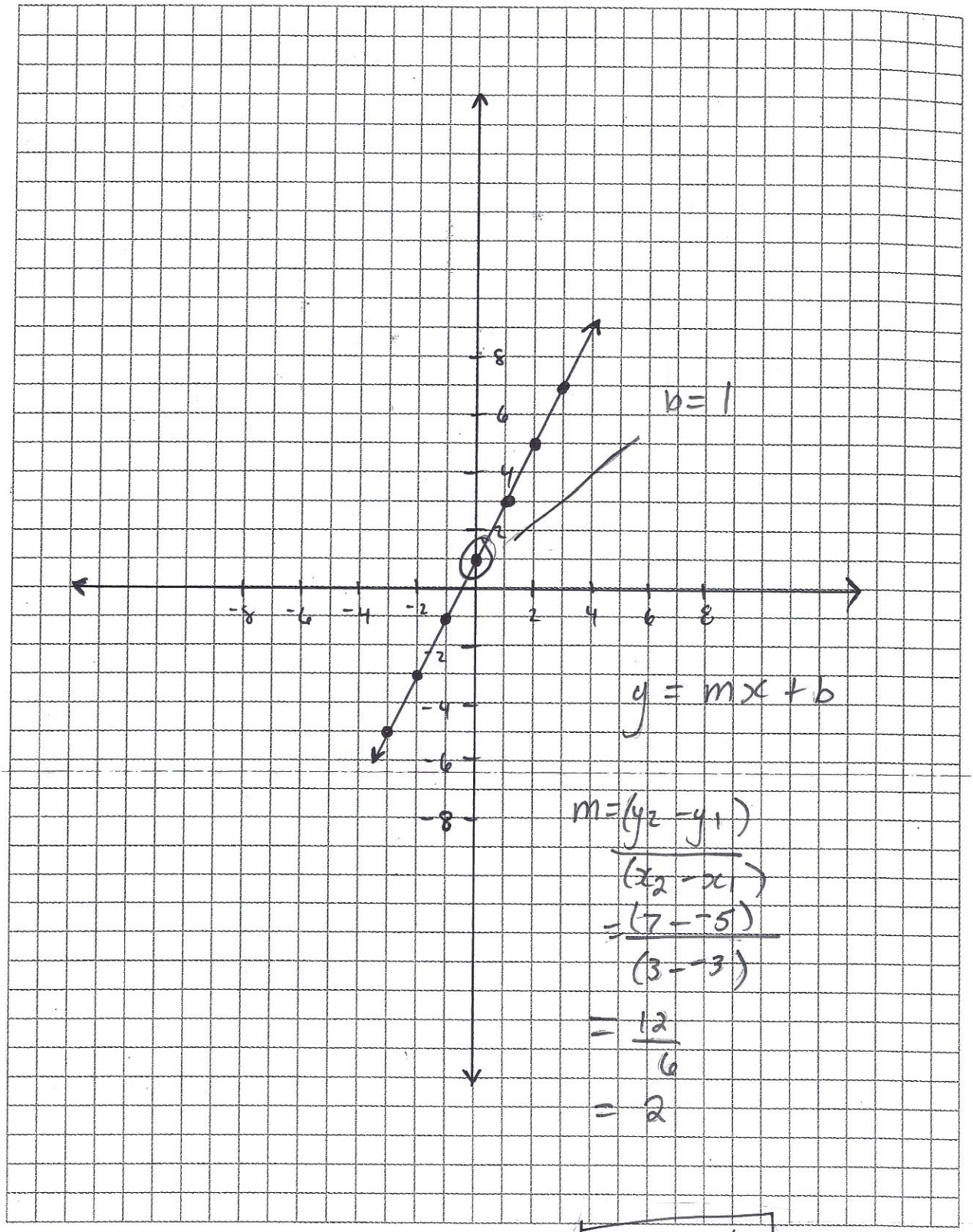
1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

Apples (g)

Date:

0.5 Centimetre Grid Paper

Graphing Linear Equations.



$y = mx + b$

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

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

$= \frac{12}{6}$

$= 2$

$y = 2x + 1$