Slope (m)

$$\frac{rise}{run} = \frac{0}{?}$$

$$\frac{rise}{run} = \frac{?}{0}$$

No zero on the bottom

decreasing (negative)   Increasing (positive)   Horizontal $m=0$ Vertical undefined.

Calculate the slope and equation of the line.

Number, n	Value, v
2	-5
4	-1
6	3
8	7

+2, +2, +2

+4, +4, +4

$$m = \frac{rise}{run}$$

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

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

$$= 2$$

$$y = mx + b$$

$$y = 2x - 9$$

Worksheet on slope...

Finding Slope from Tables   Name_____
Homework   Date_____ Period_____

Determine the slope of the line represented by the table of values. Describe the graphs of the line as increasing, decreasing, horizontal, or vertical. Copy one of these tables on the back of this page and write a situation that describes the data.

1.

x	y
-2	3
-1	5
0	7
1	9
2	11

m =

Graph Description

2.

x	y
-3	5
-2	2
-1	-1
0	-4
1	-7

m =

Graph Description

3.

x	y
1	-17
2	-13
3	-9
4	-5
5	-1

m =

Graph Description

4.

x	y
-6	-4
-5	-9
-4	-14
-3	-19
-2	-24

m =

Graph Description

5.

x	y
0	3
1	5.5
2	8
3	10.5
4	13

m =

Graph Description

6.

x	y
-2	5
-1	4.75
0	4.5
1	4.25
2	4

m =

Graph Description

7.

x	y
-2	$\frac{2}{5}$
-1	$\frac{4}{5}$
0	$\frac{6}{5}$
1	$\frac{8}{5}$

m =

Graph Description

8.

x	y
-1	1
1	2
3	3
5	4
7	5

m =

Graph Description

9.

x	y
-5	10
-2	5
1	0
4	-5
7	-10

m =

Graph Description

10.

x	y
-5	10
-3	6
-1	2
1	-2
3	-6

m =

Graph Description

11.

x	y
-4	6
-2	6
0	6
2	6
4	6

m =

Graph Description

12.

x	y
5	2
5	4
5	6
5	8
5	10

m =

Graph Description

Reading graphs page 1

Practice

1. Use this graph of a linear relation.

a) What is the value of x when $y = 3$?

$x =$ _____

b) What is the value of y when $x = 1$?

$y =$ _____

2. This graph shows a linear relation.

a) What is the value of x when $y = 4$?

$x =$ _____

b) What is the value of y when $x = -4$?

$y =$ _____

3. This graph shows a linear relation for different drilling depths.

a) Estimate the depth drilled in 1 day.
About _____ m

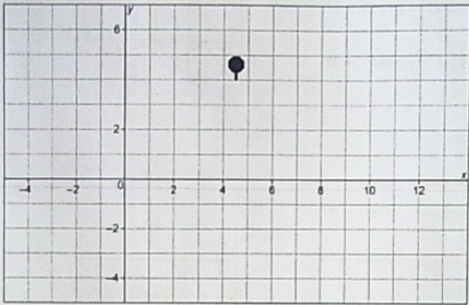b) Estimate the time taken to drill to a depth of 750 m.
About _____ days

c) Estimate the depth that will be drilled in 3 days.
About _____ m

d) Estimate the time it will _____ to drill 2000 m.
About _____ d

Reading graphs page 2

Unit 4 Puzzle

A Graphing Perspective

1. On the grid, plot the lines represented by:

a) $y = 4$

b) $x = y$

x	y
-4	___
0	___
4	___

c)

x	y
5	4
9	0
13	-4

2. Plot (4.5, 4) and (4.5, 3), and join the points with a line.

3. Plot (4.5, 2) and (4.5, 0), and join the points with a line.

4. Plot (4.5, −1) and (4.5, −4), and join the points with a line.

What do you see?
_____