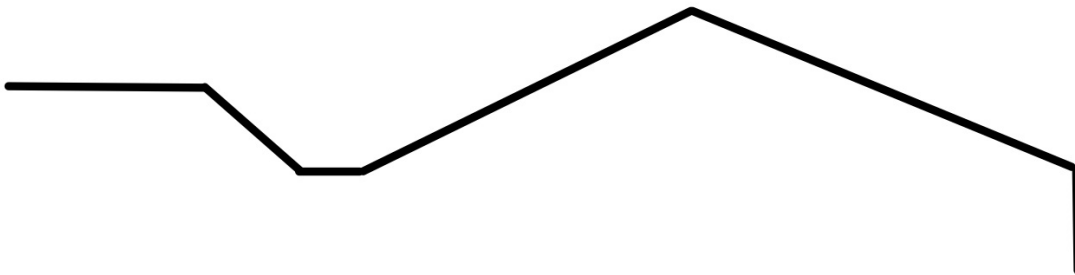


**~Warm -up**

**There has been some massive snow accumulation in the mountains and you are ready to hit the slopes! Write a story to match the illustration of the slopes below. Make sure that your story describes the positive, negative, zero and undefined slopes.**



## **Slope From a Graph**

**Fold the foldable.**

**Cut along the lines on the front so that you have  
6 sections.**

- 1) Determine if the line is positive  
or negative.
  - 2) Find 2 Points on the Line.
  - 3) Count (Rise) how many spots you must go up or down.
  - 4) Count (Run) how many spots you must go right.
  - 5) Write slope as a fraction
- \*\*Remember to include a negative  
sign if the line is negative!!

SLOPE measures the  
steepness of a line.

It is also called

Rate of change.

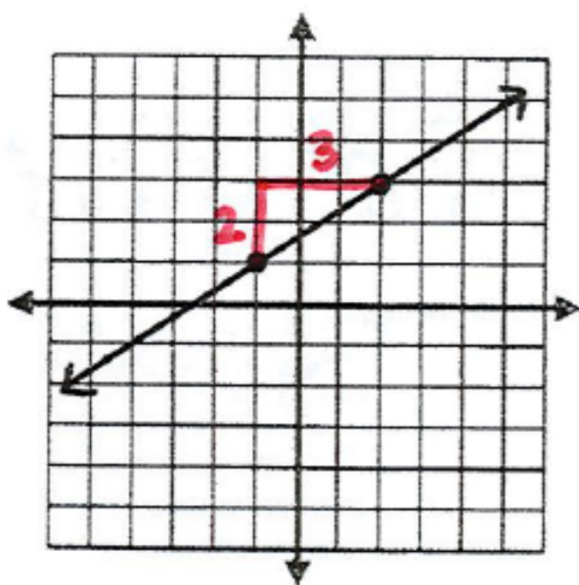
Characteristics:

Slope: "m" is the  
variable  
used

$$m = \frac{\Delta y}{\Delta x} \begin{array}{l} \text{(change in } y\text{)} \\ \text{(change in } x\text{)} \end{array}$$

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

## Open the "Positive Slope"



\* goes up from left to right.

\*  $\frac{\Delta y}{\Delta x}$  is positive

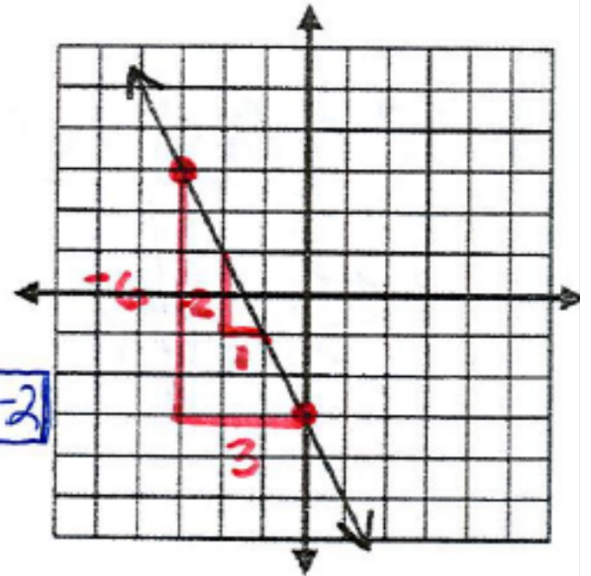
\*  $\frac{\Delta y}{\Delta x} = \frac{2}{3}$

## Open the "Negative Slope"

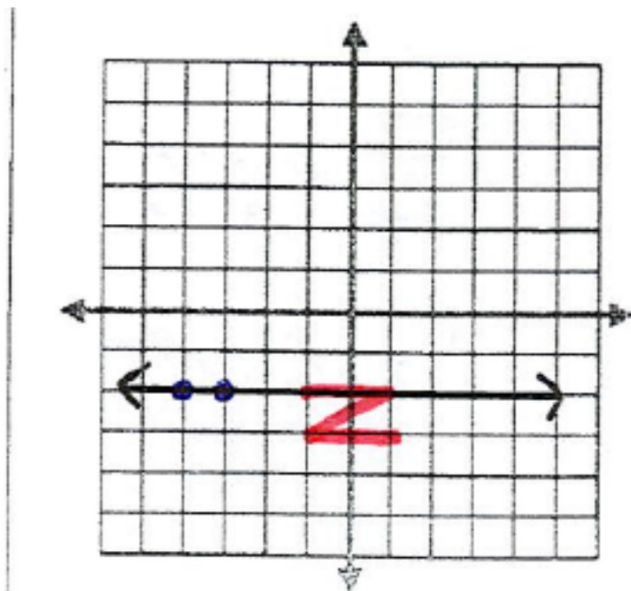
\* goes down  
from left to  
right.

\*  $\frac{\Delta y}{\Delta x}$  is negative

$$* \frac{\Delta y}{\Delta x} = -\frac{6 \div 3}{3 \div 3} = -\frac{2}{1} = \boxed{-2}$$



## Open the "Zero Slope"



\* no steepness  
\* horizontal line

$$\frac{\Delta y}{\Delta x} = \frac{0}{1} = \boxed{0}$$

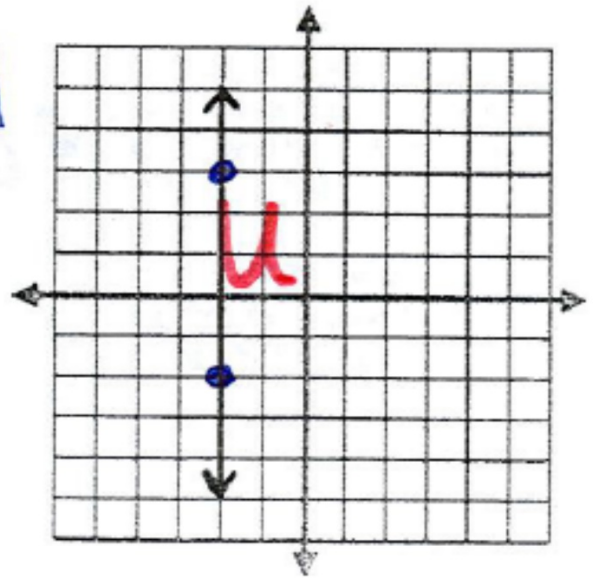


## Open the "Undefined Slope"

\* vertical line

$$* \frac{\Delta y}{\Delta x} = \frac{-5}{0} = \boxed{\text{undefined}}$$

\* Zero is underneath, so it's undefined!

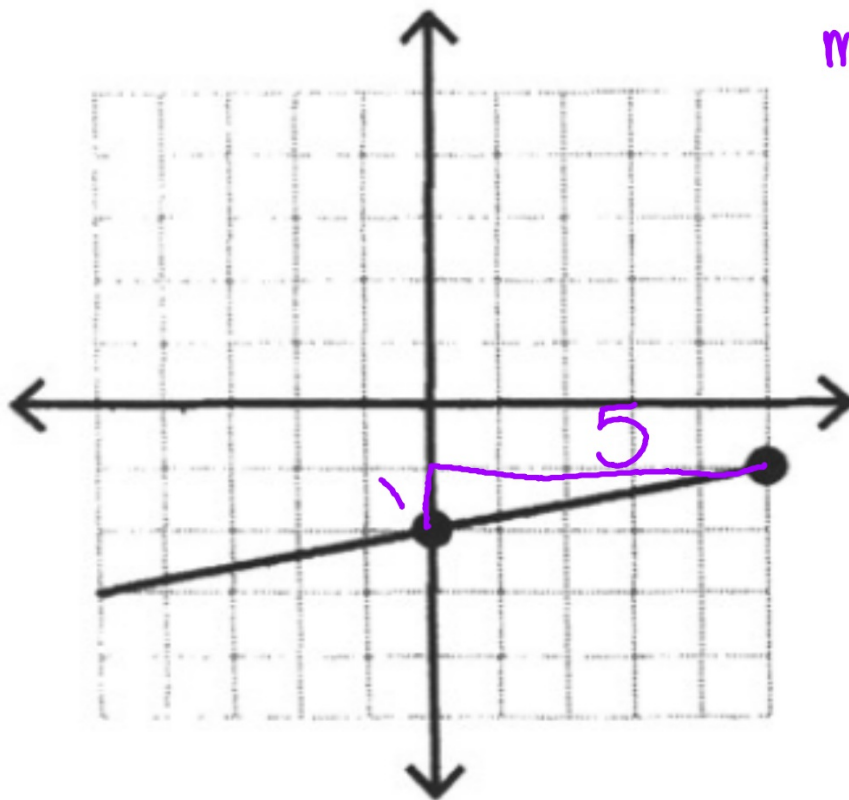


## Practice Sheet

1)

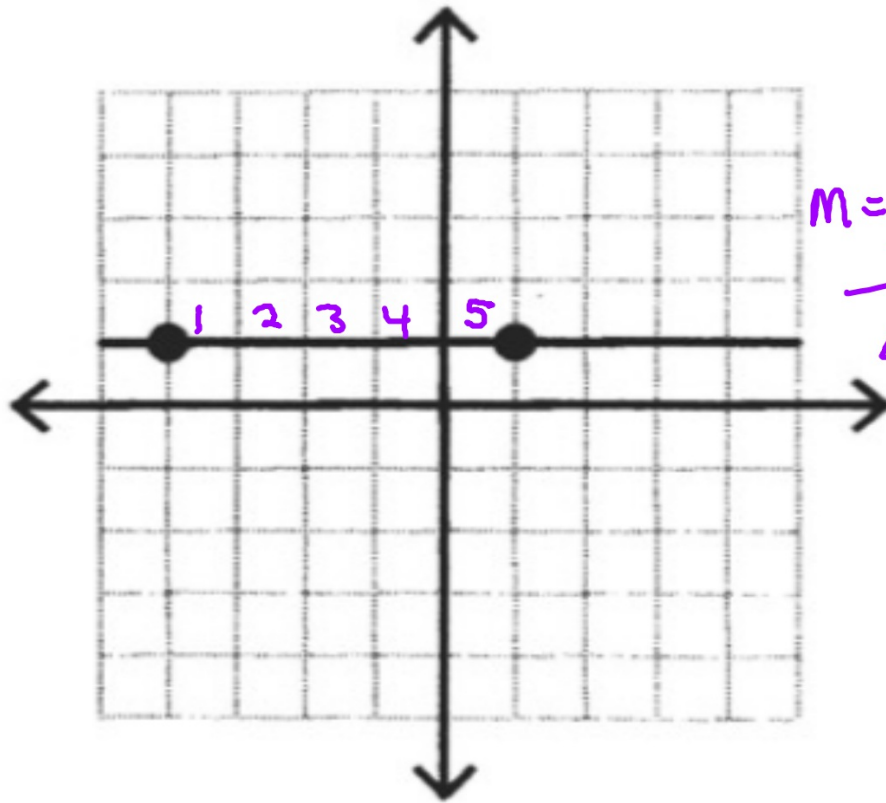
$$m = \frac{\Delta y}{\Delta x} = \frac{1}{5}$$

$$m = \frac{1}{5}$$



6)

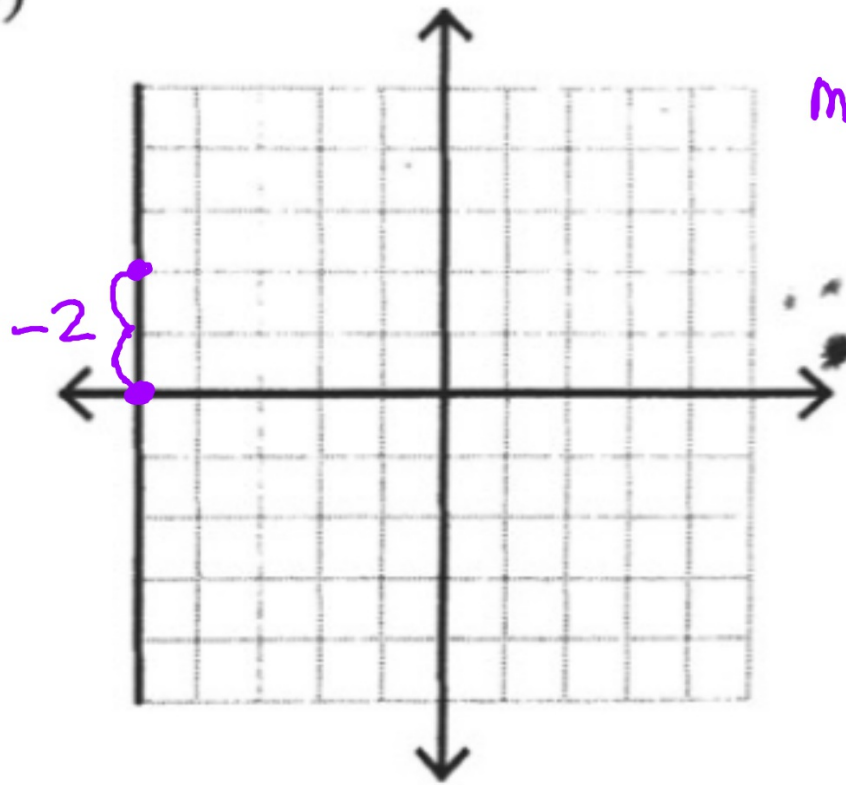
zero  
slope



$$m = \frac{\Delta y}{\Delta x} = \frac{0}{5} = 0$$

$m = 0$

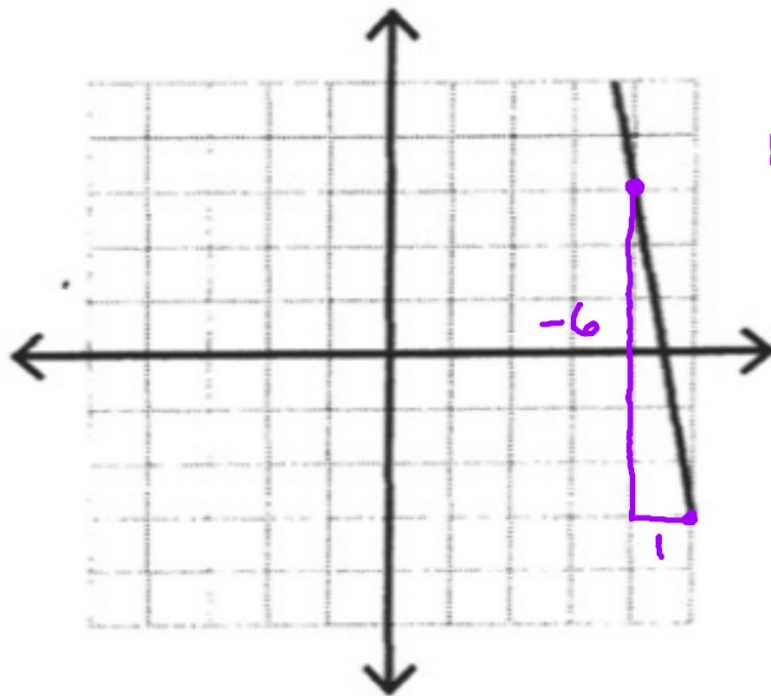
10)



$$m = \frac{\Delta y}{\Delta x} = \frac{-2}{0}$$

undefined

12)



$$m = \frac{\Delta y}{\Delta x} = \frac{-6}{1} = -6$$

$$m = -6$$

## **DHW Check**

**Box 7: Unit Rate # 3**

**Box 8: Unit Rate # 8**

**Box 9: Finding Slope # 10**

**Box 10: Finding Slope # 16**

**Classwork/Homework:**

**Finish the Slope from a Graph Practice Sheet**  
**\*\*SHOW triangles when finding the slope!!\*\***







