Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

A Linear Equation is an equation that forms a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Linear Equations can be written in many forms. One of the most useful forms of linear equations is :

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

It looks like : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Two very important characteristics of linear relationships can be seen in this equation:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**y = m x +b**

SLOPE

Definition: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Slope can be…

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_





There are three ways that are often used for finding slope depending on the representation that you are given.

Slope = m = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Finding Slope from a TABLE: (the SAME as finding the rate of change) Use slope = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
| **X** | **Y** |
| -4 | 10 |
| 0 | 5 |
| 4 | 0 |
| 8 | -5 |

|  |  |
| --- | --- |
| **X** | **Y** |
| 10 | 1 |
| 8 | 4 |
| 6 | 7 |
| 4 | 10 |

|  |  |
| --- | --- |
| **X** | **Y** |
| 2 | 8 |
| 3 | 10 |
| 4 | 12 |
| 5 | 14 |

Slope: \_\_\_\_\_\_\_ Slope: \_\_\_\_\_\_\_ Slope: \_\_\_\_\_\_\_

**Finding Slope from a graph** Use slope = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Examples:





 Slope: \_\_\_\_\_\_\_\_\_\_\_\_ Slope: \_\_\_\_\_\_\_\_\_\_\_ Slope: \_\_\_\_\_\_\_\_\_\_\_

Finding Slope from 2 points: Use slope = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ given $\left(x\_{1}, y\_{1}\right)\left(x\_{2}, y\_{2}\right)$

Examples:

1) (2,3) and (8,10) 2) (-3,5) and (2,0) 3) (-1,-2) and (-1, 4)

Slope = \_\_\_\_\_\_\_\_\_\_ Slope = \_\_\_\_\_\_\_\_\_\_\_\_\_ Slope = \_\_\_\_\_\_\_\_\_\_\_

Finding slope from an equation in slope-intercept form:

Remember that the m is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ which is the coefficient in front of x when the equation is solved for y.

Examples:

1) y = -2x - 5 2) x – 2y = 6 3) y = x +7 4) y = 4

Slope: \_\_\_\_\_\_\_ Slope: \_\_\_\_\_\_\_\_ Slope: \_\_\_\_\_\_\_\_\_ Slope: \_\_\_\_\_\_\_\_\_