Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Table #: \_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_

**4.2A The Slope Formula\_Classwork**

*Objective: find slopes of lines by using two points*

*HW: 4.2A pg 154\_#1, 3, #7-18 ALL*

***EXAMPLE 1: Given the slope (m) and the y-intercept (b), write a linear function for each problem.***

|  |  |  |
| --- | --- | --- |
| 1. m = 3; b = -3
 | 1. m = $-\frac{1}{3}$; b = 2
 | 1. m = 0; b = 4
 |
| 1. m = $\frac{3}{4}$; b = 0
 | 1. m = -1; b = 6
 | 1. m = -5; b = -2
 |

***EXAMPLE 2: Use the FORMULA*** $\frac{Y\_{2}-Y\_{1}}{X\_{2}-X\_{1}} $***to find the slope. Use two points to find the slope.***

|  |  |  |
| --- | --- | --- |
| 1. (-3, 5) and (2, 18)
 | 1. (3, -3) and (3, -1)
 | 1. (4, -3) and (2, -3)
 |
| 1. (5, -1) and (9, -4)
 | 1. ( 5, 2) and (1, 0)
 | 1. (0, 0) and (3, -1)
 |
| 1. (9, 2) and (8, -7)
 | 1. (-4, 4) and (-7, 2)
 | 1. (1, 0) and (3, -4)
 |

***WARM-UP***

Find the slope and y-intercept for each problem.

|  |  |  |
| --- | --- | --- |
| 1.Slope: y-intercept:  | 2.Slope: y-intercept: | 3.Slope: y-intercept:  |
| 4.Slope: y-intercept: | 5.Slope: y-intercept: | 6.Slope: y-intercept: |