Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Table#:\_\_\_\_\_\_\_\_Period:\_\_\_\_\_\_\_\_Date:\_\_\_\_\_\_\_\_\_\_\_

**4.6A Writing A Linear Equation Using Slope-Intercept Form\_Classwork**

*Objective: write equations of lines in slope-intercept form. CC.SS.8.F.4*

*HW: 4.6A pg 182\_#5-15 ALL*

Writing an equation given TWO POINTS (using SLOPE INTERCEPT FORM):

1. Use slope formula to find the slope: . REDUCE FRACTION

2. Substitute in the slope (m) and pick a point (x, y).

3. Solve for the y-intercept (b) using slope intercept form: y = mx + b

4. Substitute only the slope (m) and the y-intercept (b) into slope-intercept form

**EXAMPLE PROBLEM:** *Find the Slope Intercept Form of the line through (5, 7) and (3, 1).*

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| #1: FIND SLOPE | #2: FIND Y-INTERCEPT | #3: WRITE EQUATION |
| (5, 7) and (3, 1). | and (5, 7)  y = mx + b  7 = (3)(5) + b  -8 = b | y = mx + b  y = 3x – 8  Keep x and y as variables. |

***EXAMPLE PROBLEM:*** *Write an equation of a line in slope-intercept form given a point (4, 2) and a slope of 3*

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| **What do you know?** | **Substitute and Solve** | **Write Equation** |
| y = 2  x = 4  m = 3  b = ?? | y = mx + b  2 = (3)(4) + b  2 = 12 + b  -10 = b | y = mx + b  y = 3x – 10  Keep x and y as variables. |

Write an equation of a line in slope-intercept form given the slope and a point.

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| **EXAMPLE 1.**  Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | **EXAMPLE 2.**      Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

Write a linear equation for each table.

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| **EXAMPLE 3:**      Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | **EXAMPLE 4:**      Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

***YOU TRY:*** *Write an equation of a line in slope-intercept form given the slope and a point.*

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| Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
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