**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per. \_\_\_\_\_\_\_**

**Unit 19 – Getting Ready for 9th Grade**

*Graphing on the Coordinate Grid with Point Slope Form*

|  |  |
| --- | --- |
| x | y |
| 2 | Y1 |
| 5 | Y2 |

1. The table below shows two coordinate pairs *( x , y )* that satisfy the equation *y* = *mx* + *b* for some numbers *m* and *b.*
2. If *m* = 7, determine possible values for y1 and y2. Explain your answers.
3. Find another pair of y-values that could work for m = 7. Explain why they would work. How do these y-values compare to the first pair you found for m = 7?
4. Use the same x-values in the table and find possible values for y1 and y2 if *m* = 3. Explain your answers.
5. Find another pair of y-values that could work for m = 3. Explain why they would work. How do these y-values compare to the first pair you found for m = 3?

Each of the three tables below shows two coordinate pairs *( x , y )* that satisfy the equation

*y* = *mx* +*b* for some numbers *m* and *b.* If *m* = 3 in each case, find possible values for y1 and *y2* for each pair of x-values given. Show your work below the table.

1. b. c.

|  |  |
| --- | --- |
| ***x*** | ***y*** |
| 4 | *y1* |
| 9 | *y2* |

|  |  |
| --- | --- |
| ***x*** | ***y*** |
| 2 | *y1* |
| 13 | *y2* |

|  |  |
| --- | --- |
| ***x*** | ***y*** |
| -1 | *Y1* |
| 14 | *Y2* |

|  |  |
| --- | --- |
| ***x*** | ***Y*** |
| 4 |  |
| 9 |  |
| 2 |  |
| 13 |  |
| -1 |  |
| 14 |  |

Suppose we take all six x-values from the three tables above. List the six corresponding y-values that to the coordinate pairs that satisfy the equation if m= 3.

Fill out the table to the right then explain how you know they will all work with the same equation.

The next activity in this section revolves around a famous line from a television show or film.

Who said *“Toto, I’ve got a feeling we’re not in Kansas anymore?”*

**Directions**: Using another sheet of graph paper, graph each equation using point slope form. Write the letter next to the point on the line for the question number in the blanks below to find the answer.

 **\_\_ \_\_ \_\_ \_\_** \_\_ \_\_ \_\_ \_\_ \_\_ \_\_ \_\_

 9 6 3 7 10 8 1 4 8 2 5

1. y-1 = 2(x-3) 2. y+4 = 3(x+2) 3. y+4 = -(x-1) 4. y-3 = $\frac{1}{2} $(x+4)

 R (4,3) M (-2,1) F(-3,5) N(0,2) C(3,-2) D(0,-3) L(-2,4) S(4,4)

5. y+1 = $-\frac{2}{3} $(x+3) 6. y-4 = $-\frac{1}{5}$ (x+3) 7. y-2 = -5(x+4) 8. y+3 = (x+1)

 D(0,-3) E(0,1) T(-2,-3) U(2,3) W(-1,-1) Y(-3,-3) A(2,0) I(-4,2)

9. y-3 = -6(x-1) 10. Y-3 = -7(x-4)

 L(-4,5) J(2,-3) P(3,-4) G(5,-4)