Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Table #: \_\_\_\_\_\_\_\_Period: \_\_\_\_\_\_Date: \_\_\_\_\_\_

**6.3A NOTES – Linear Functions**

*HW: (6.3A) p. 261 #5 – 10, 20 - 23 (Solutions on p. A29)*

*Objective: Interpret y = mx + b as defining a linear function. Writing linear functions from tables. CCSS: 8.F.3*

**A LINEAR FUNCTION** can be written in the form y = mx + b, where m is the slope and b is the y-intercept.

|  |  |
| --- | --- |
| **Writing a Linear Function Using a Graph**To find slope or “m” $\rightarrow $ $\frac{rise}{run}$To find y-intercept or “b” $\rightarrow $  **IT IS THE POINT THAT LIES ON THE Y-AXIS** | **EXAMPLE 2: Writing a Linear Function Using a Table**To find slope or “m” $\rightarrow $ $\frac{change in y}{change in x}$To find y-intercept or “b” $\rightarrow $  **WHEN x = 0,** **THE “y value” IS THE Y-INTERCEPT.** FOR EXAMPLE, (0,2) THE Y-INT. OR b is **2**  |
| **EXAMPLE 1: Use the graph to write a linear function that relates y to x.** | **EXAMPLE 2: Use the table to write a linear function that relates y to x.** |
| **EXAMPLE 3: Use the graph to write a linear function that relates y to x.** | **EXAMPLE 4: Use the table to write a linear function that relates y to x.** |



|  |  |
| --- | --- |
|   |  |
| 3.  | 4.  |
| 5. | 6.  |
| 7. | 8. |

|  |  |  |
| --- | --- | --- |
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| --- | --- |
| **9. MOVIES:** The table shows the cost y (in dollars) of renting x movies. 1. The independent variable is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 The dependent variable is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_1. Write a linear function that relates y to x. Interpert the slope.

Linear function: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_The slope in the linear function means: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_1. Graph the linear function
2. How much does it cost to rent 3 movies?

It costs \_\_\_\_\_\_\_\_\_ to rent 3 movies.  |  |

 |

Took this off so we could include “MOVIE” question

WARM UP

|  |  |  |
| --- | --- | --- |
| 1. Graph y = -3   | 2. Graph x = 4  | 3. Graph $y= \frac{1}{2}x+1$ |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| x | 1 | 2 | 3 | 4 | 5 |
| y | 7 | 14 | 21 | 28 | 35 |