Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***Variables and Patterns***

**Investigation 3.2**

***Problems D,E***

 Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hour \_\_\_\_



 **The equations you wrote yesterday in Questions A – C all have the form *y = mx*.**

**1.** For each equation below, make a table of ( *x, y* ) values. Use whole-number values of *x* from 0 to 6. Then use your table to make a graph.

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 **a.** ***y =* 2*x***

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| --- | --- |
| ***x*** | ***y*** |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |
| 6 |  |

 **b. *y =* 0.5*x***

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| --- | --- |
| ***x*** | ***y*** |
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**c.** ***y =* 1.5*x***

|  |  |
| --- | --- |
| ***x*** | ***y*** |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |
| 6 |  |

 **d. *y = x***

|  |  |  |  |  |  |  |  |  |  |  |  |
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| ***x*** | ***y*** |
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**2.** Explain the connection between the number *m* and the pattern in the table of values and graph of *y=mx*

 **3. a.** Explain how you can find the value of *y* using a table, graph, or equation if *x* = 2.

 **b.** Explain how you can find the value of *x* using a table, graph, or equation if *y* = 6.



What similarities and differences do you find in the equations, tables, and graphs for the relationships in parts a – d?