**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**8.14 Functions**

**Practice:**

1. Words: **John went to midnight bowling. Shoe rental was $6 and each game cost $3.**

Label the independent and dependent variables:

Rule from words:

Table of values: **for rule above x 3x + 6 y**

Graph: **for rule above**

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2. Label the input and output of the following equation: 

3. Label the independent variable & dependent variable in the following equation: 

4. Make a table for the following function  using the following *x-values* 

|  |  |  |  |
| --- | --- | --- | --- |
| X  |  | Y | (x,y) |
| -1 |  |  |  |
| 0 |  |  |  |
| 2 |  |  |  |
| 4 |  |  |  |

5. Write a function for the following situation:

A yoga instructor charges a one-time enrollment fee of $15 plus $5 for each class. If Asia spent $45 for enrollment and classes, how many classes did she take?

Function (x will represent \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) (y will represent \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)

Find the number of classes taken if she spent $45.

6. Shawn used an equation to make the following function table. Which equation could he have used to create the table?

|  |  |
| --- | --- |
| *x* | *y* |
|  -4 | 2 |
|  -2 | 3 |
| 0 | 4 |
| 4 | 6 |
| 6 | 7 |

 A) 

 B) 

C) 

 D) 

7. Which table contains only pairs that satisfy the equation 

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| x | -1 | 0 | 2 | 3 |
| y | -10 | -6 | 2 | 6 |

A)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| x | -2 | 0 | 1 | 2 |
| y | 6 | -6 | -2 | 1- |

B)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| x | -3 | -2 | 1 | 2 |
| y | 18 | 10 | 2 | 2 |

 C)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| x | -1 | 1 | 3 | 5 |
| y | -2 | -10 | -18 | -26 |

 D)

8. Graph the following function: 

|  |  |  |  |  |  |  |  |  |  |
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9. Which table contains only values that satisfy the following?

 

|  |  |
| --- | --- |
| x | y |
| -3 | 2 |
| -1 | 4 |
| 0 | -3 |
| 1 | -4 |

|  |  |
| --- | --- |
| x | y |
| -3 | 0 |
| -1 | 2 |
| 0 | 3 |
| 1 | 4 |

 B

10. Use the Vertical Line Test to answer the following question:



11. State the domain and range for the following relation:

|  |  |  |  |  |  |  |  |  |  |
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12. State the domain for the following relation:

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