$\qquad$
$\qquad$ Analyzing and Sorting Graphs

## Write the following information beside each graph:

Function family, i.e. linear, quadratic, exponential, linear piecewise, or absolute value

## Discrete or continuous

Increasing, decreasing, constant, or combination
Absolute minimum or maximum
1.

3.

5.

2.

4.

6.

7. Use the vertical line test to determine if the graph is a relation, a function, both a relation and a function, or neither a relation nor a function.
A. Relation only
B. Function only
C. Both a relation and a function
D. Neither a relation nor a function

8. Circle the T-table that represents a function.

| $x$ | $f(x)$ | $x$ | $f(x)$ | $x$ | $f(x)$ | $x$ | $f(x)$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | -1 |  | 2 | -2 |  | -2 | 0 |  |
|  | 0 | 0 | 0 |  | 0 | 2 |  | 0 |
| 3 | 0 |  | 2 | 2 | 2 | 0 | 2 | 2 |
| 5 | 1 |  | 2 | 4 | 1 | 1.7 | 0 | -2 |
| 7 | 2 |  | 8 | 4 |  | 0 |  |  |

9. Circle the graph that represents a function.

W.

Y.

X.

Z.
10. Circle the relation that describes a function.
A. $\{(0,0),(0,2),(2,0),(2,2)\}$
B. $\{(2,2),(2,3),(3,2),(3,3)\}$
C. $\{(2,-1),(2,1),(3,-1),(3,1)\}$
D. $\{(-2,-3),(-3,-2),(2,3),(3,2)\}$
11. Do the ordered pairs represent a relation, a function, both a relation and a function, or neither a relation nor a function?

$$
(-2,-1),(1,-4),(7,-10),(8,-11)
$$

A. Relation only
B. Function only
C. Both a relation and a function
D. Neither a relation nor a function
12. Circle the relation diagram that represents a function.

13. Circle the mapping that represents a function.

W.

X.

Y.

Z.
14. What is the domain and the range of the following relation?

$$
\{(0,0),(1,-1),(1,1),(2,2)\}
$$

## Domain:

## Range:

15. What is the domain and range of the following T-table?

Domain:

| $x$ | $f(x)$ |
| :---: | :---: |
| -1 | -1 |
| 0 | 0 |
| 1 | 1 |
| 2 | 8 |

