$\qquad$ Per. $\qquad$

1. Name the set of ordered pairs represented by the mapping diagram shown below.

$$
\begin{aligned}
& \text { A. }\{(13,1),(3,17),(17,5),(7,19),(23,11)\} \\
& \text { ○B. }\{(1,13),(17,3),(5,17),(19,7),(11,23)\} \\
& \text { C. }\{(1,13),(3,17),(5,17),(7,19),(11,23)\} \\
& \text { D. }\{(13,1),(17,3),(17,5),(19,7),(23,11)\}
\end{aligned}
$$


2. Which of the following mapping diagrams represents the relation. $\{(4,6),(3,8),(3,7),(9,9),(4,1),(5,12)\}$

○A.


○в.


Oc.


Is the relation a function?

- No
- Yes

3. Determine whether the following relation represents a function. $\{(5,-4),(3,-3),(5,-6),(8,-1)\}$
4. Draw a mapping diagram to represent the relaiont shown in the table. Then decide if the relation is a function.

| Input | Output |
| :---: | :---: |
| 24 | 1 |
| 32 | 7 |
| 24 | 12 |
| 32 | 16 |



## Determine whether the graphs are a function.

5. 



- No
- Yes

6. 



- No
$\bigcirc$ Yes

7. The value of $y$ is one less than $x$. Represent this relationship using a table, an equation, and a graph.

| $\mathbf{x}$ | $\mathbf{y}$ | Ordered <br> Pair $(\mathbf{x}, \mathbf{y})$ |
| :---: | :---: | :---: |
| 0 | -1 | $(0,-1)$ |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |

Equation: $\mathrm{y}=$

8. Use the graph to make a table of values for the function.

Complete the table.

| $\mathbf{x}$ | $\mathbf{y}$ |
| :---: | :---: |
| -3 | $\square$ |
| $\square$ | -2 |
| 1 | $\square$ |
| $\square$ | 4 |


9. Make a table of values for the function $y=3 x$

| $\mathbf{x}$ | $\mathbf{y}$ |
| :---: | :---: |
| -5 | $\square$ |
| -2 | $\square$ |
| 0 | $\square$ |
| 2 | $\square$ |
| 5 | $\square$ |

10. Graph the relation. Then determine if it is a linear function. $\{(1,3),(2,3),(3,7),(4,9),(5,11)\}$

- No $\bigcirc$ Yes



ه


a

a)

11. The graph of the set of ordered pairs represents a linear function. Find the rate of change.

$$
\{(1,4),(2,6),(3,8),(4,10)\} \quad \text { Rate of change }=
$$

12. Does the relation represented by the table represent a linear function?
13. Decide whether each function is linear or nonlinear.

| Input | Output |
| :---: | :---: |
| 1 | 7 |
| 2 | 9 |
| 3 | 11 |
| 4 | 13 |
| 5 | 15 |

$\bigcirc$ No $\bigcirc$ Yes

Funciont $I$ is :
linear
nonlinear

Function II is: $\begin{gathered}\text { linear } \\ \text { nonlinear }\end{gathered}$
14. Justin opens a savings account with $\$ 3$. He saves $\$ 5$ each week. The table represents his account balance. Decide whether the talbe represents a linear function or a nonlinear function.

| Justin's Savings Account |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Week | 0 | 1 | 2 | 3 | 4 | 5 |  |
| Money in Account | 3 | 8 | 13 | 18 | 23 | 28 |  |

linear nonlinear
15. Decide whether the table represents a linear function or a nonlinear function.

| Input | Output |
| :---: | :---: |
| 0 | 7 |
| 1 | 14 |
| 2 | 23 |
| 3 | 34 |
| 4 | 47 |

