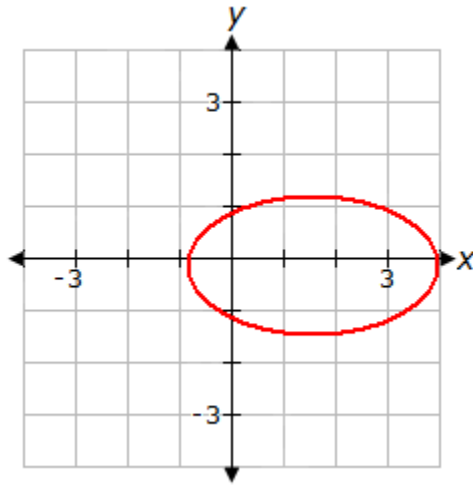


RELATIONS & FUNCTIONS Worksheet

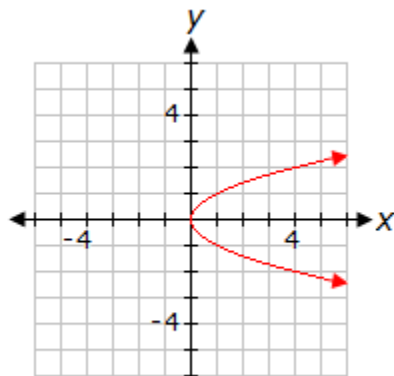
1.



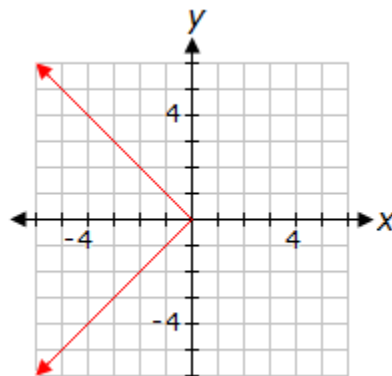
Using the vertical line test, determine if the graph above shows a relation, a function, both a relation and a function, or neither a relation nor a function.

- A. neither a relation nor a function
- B. relation only
- C. both a relation and a function
- D. function only

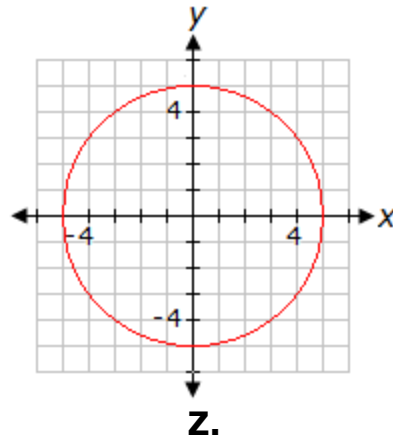
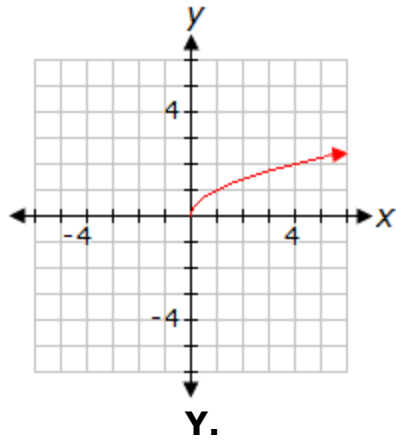
2. Which of these graphs represents a function?



W.



X.



- A. Z
- B. X
- C. W
- D. Y

3. Which of these t-tables represents a function?

x	$f(x)$
5	-1
3	0
5	1
7	2

W.

x	$f(x)$
2	-2
0	0
2	2
8	4

X.

x	$f(x)$
-2	0
0	2
2	0
1	1.7

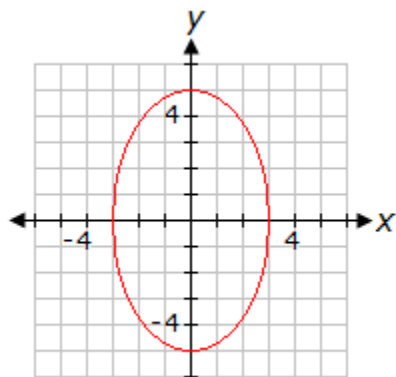
Y.

x	$f(x)$
-2	0
0	2
2	0
0	-2

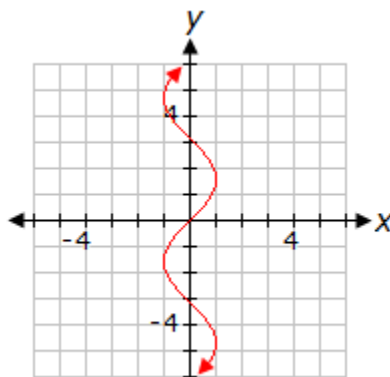
Z.

- A. W
- B. Y
- C. Z
- D. X

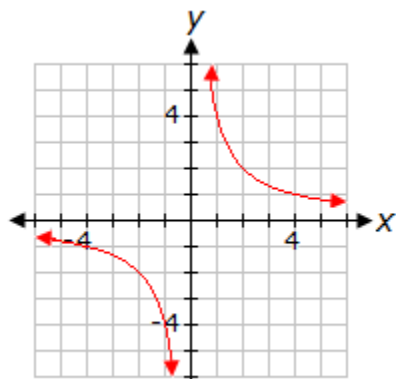
4. Which of these graphs represents a function?



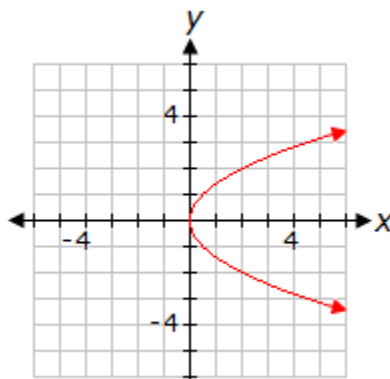
W.



X.



Y.



Z.

- A. Z
 - B. W
 - C. X
 - D. Y
-

5. Which of the following relations describes a function?

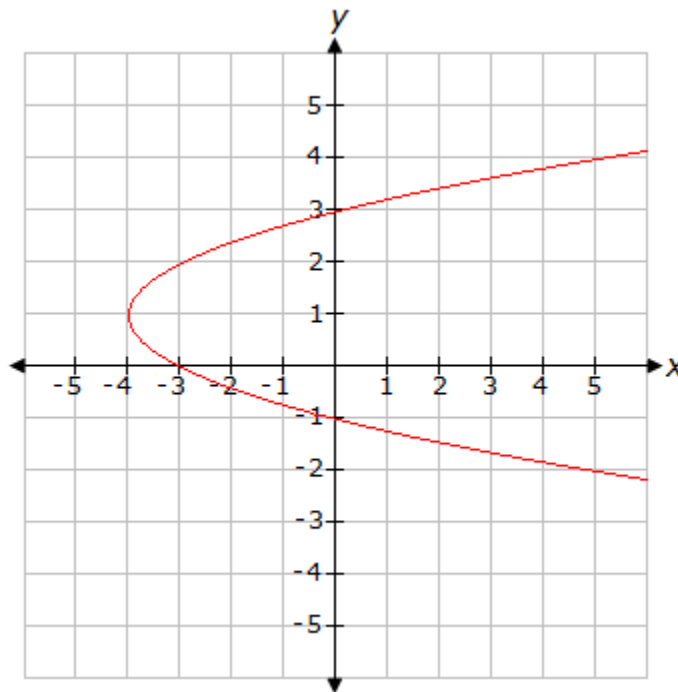
- A. $\{ (0, 0), (0, 2), (2, 0), (2, 2) \}$
 - B. $\{ (2, 2), (2, 3), (3, 2), (3, 3) \}$
 - C. $\{ (2, -1), (2, 1), (3, -1), (3, 1) \}$
 - D. $\{ (-2, -3), (-3, -2), (2, 3), (3, 2) \}$
-

6. Do the ordered pairs below 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. neither a relation nor a function
 - B. both a relation and a function
 - C. relation only
 - D. function only
-

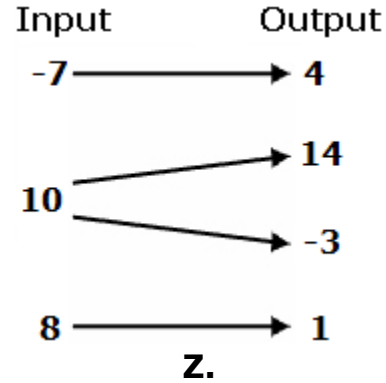
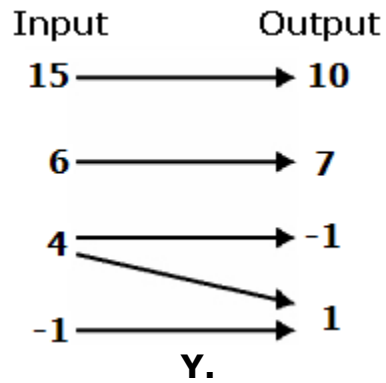
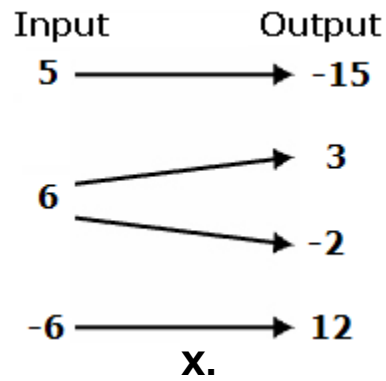
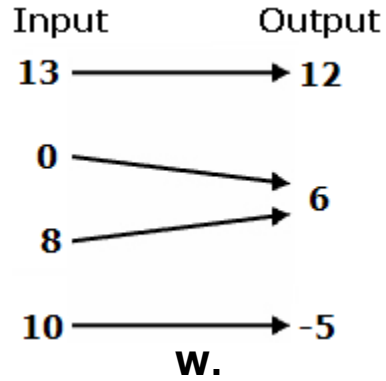
7.



Determine whether this picture is an example of a function, relation, function and relation, or neither relation nor function.

- A. function and relation
 - B. function only
 - C. relation only
 - D. neither function nor relation
-

8. Which relation diagram represents a function?

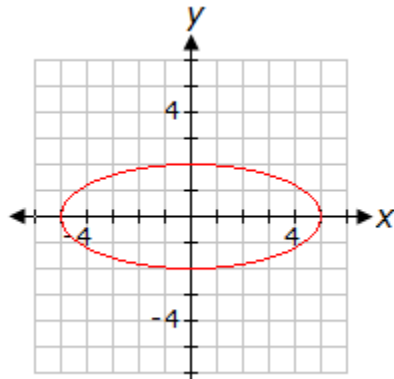


- A. Z
 - B. X
 - C. W
 - D. Y
-

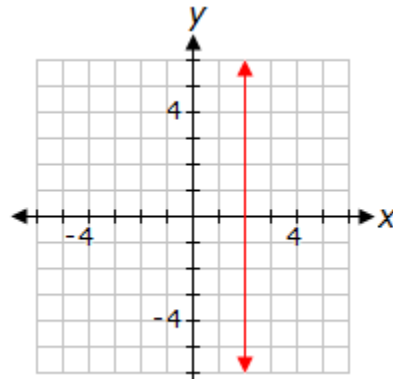
9. Which of the following relations describes a function?

- A. $\{ (2, 2), (3, 2), (4, 2), (5, 2) \}$
 - B. $\{ (-2, 0), (0, -2), (0, 2), (2, 0) \}$
 - C. $\{ (0, 0), (2, -2), (2, 2), (3, 3) \}$
 - D. $\{ (2, 3), (2, 4), (2, 5), (2, 6) \}$
-

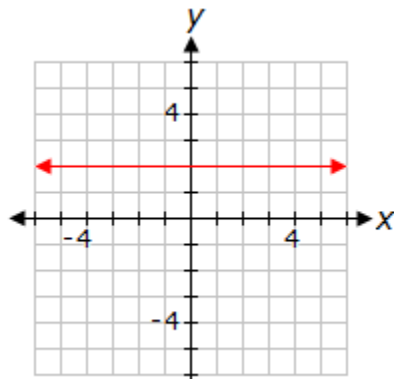
10. Which of these graphs represents a function?



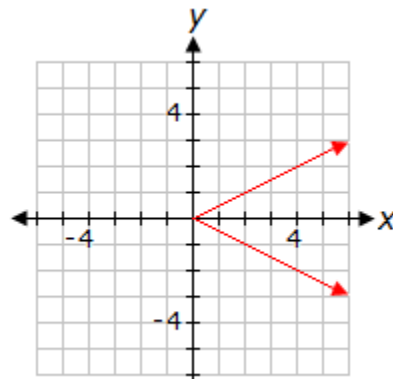
W.



X.



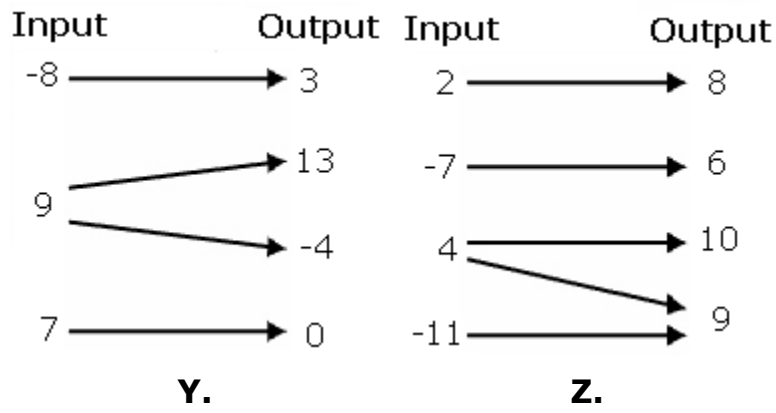
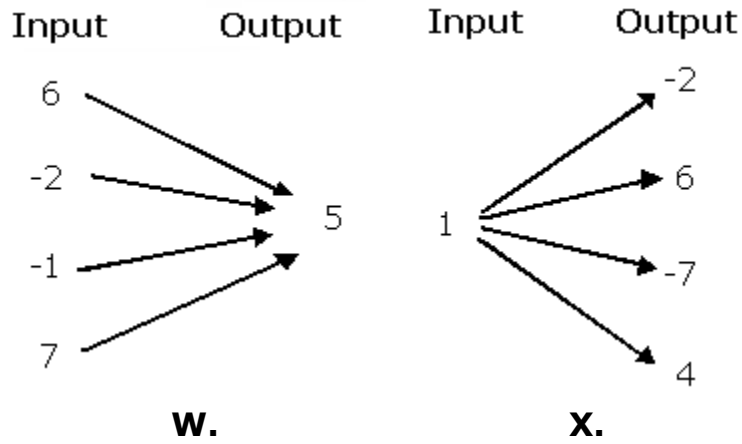
Y.



Z.

- A. Y
 - B. X
 - C. Z
 - D. W
-

11. Which relation diagram represents a function?

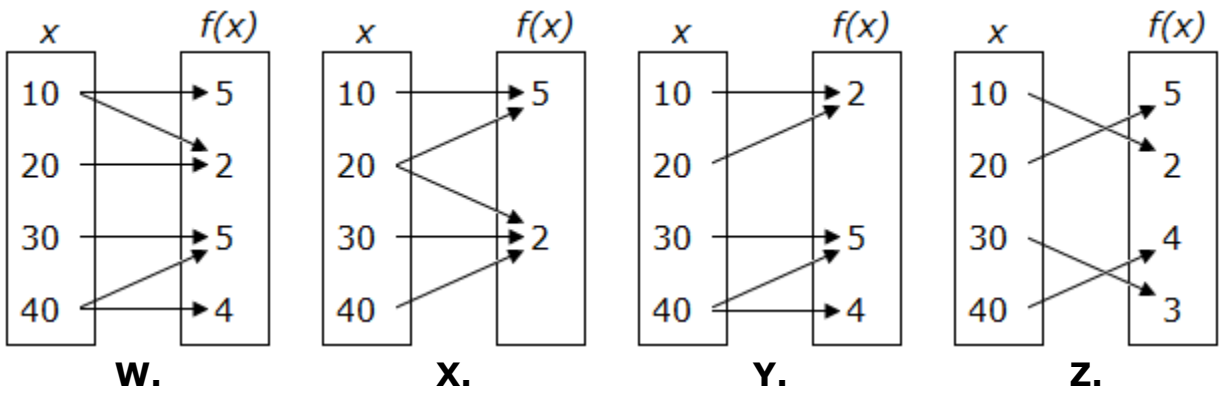


- A. W
 - B. X
 - C. Y
 - D. Z
-

12. Which of the following relations describes a function?

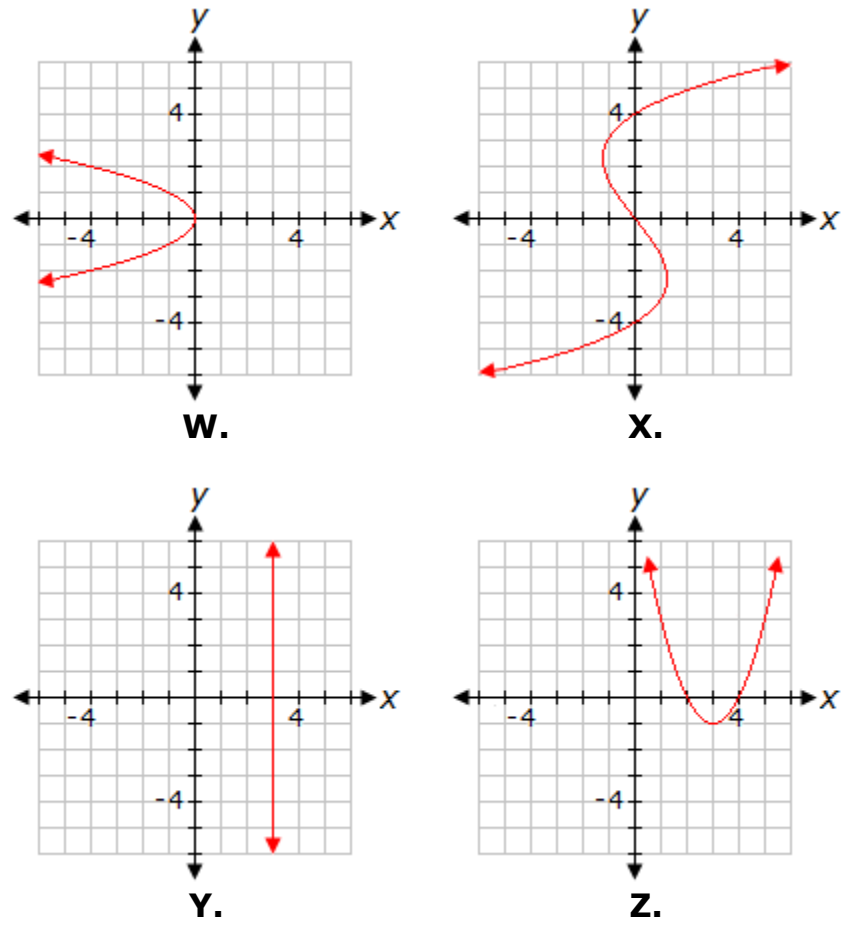
- A. $\{ (0, 0), (1, -1), (1, 1), (2, 2) \}$
 - B. $\{ (-2, 2), (-1, -1), (-1, 1), (0, 0) \}$
 - C. $\{ (-1, 0), (0, 1), (1, 0), (0, -1) \}$
 - D. $\{ (-2, 2), (-1, 1), (1, 1), (2, 2) \}$
-

13. Which of these mappings is a function?



- A. W
- B. Z
- C. X
- D. Y

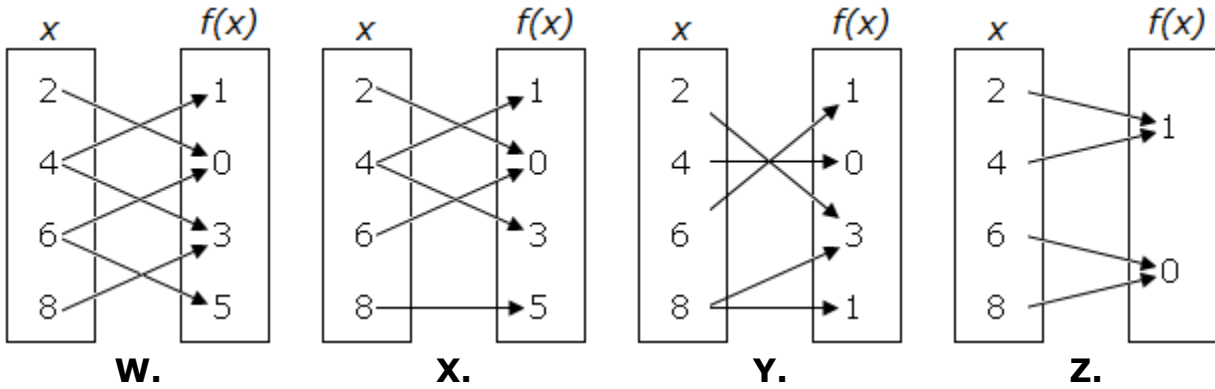
14. Which of these graphs represents a function?



- A. X

- B. W
 - C. Y
 - D. Z
-

15. Which of these mappings is a function?



- A. W
 - B. Y
 - C. X
 - D. Z
-

16. Which of the following represents a relation and not a function?

- A.

x	-10	-6	-10	1
y	34	32	40	34
 - B.

x	-10	-6	-2	1
y	34	32	40	34
 - C.

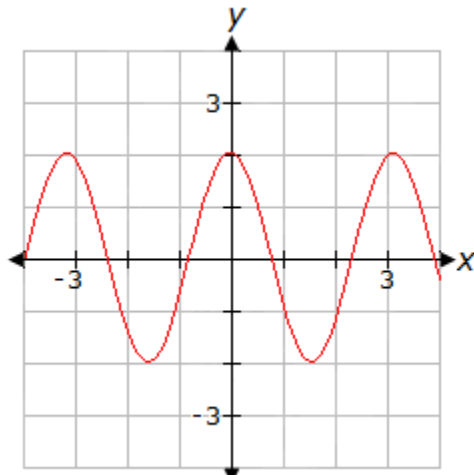
x	-10	-6	6	12
y	34	32	40	34
 - D.

x	6	-6	12	-10
y	34	32	40	34
-

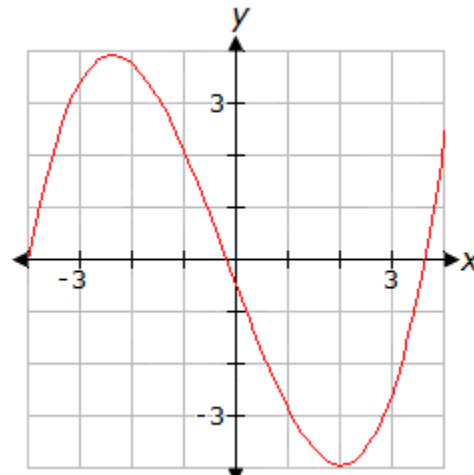
17. Think about the vertical line test and answer the following question. Would a vertical line be a relation, a function, both a relation and a function, or neither a relation nor a function?

- A. function only
 - B. both a relation and a function
 - C. neither a relation nor a function
 - D. relation only
-

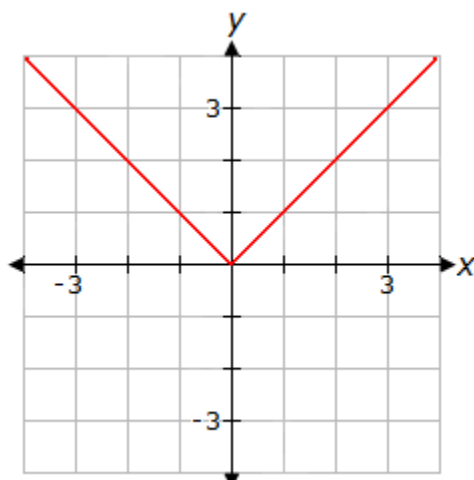
18. Which of the following graphs is not a function?



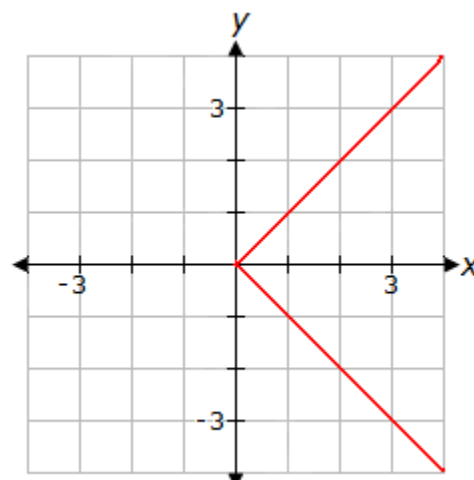
W.



X.



Y.



Z.

- A. Y
 - B. W
 - C. Z
 - D. X
-

19. Which of these t-tables represents a function?

x	$f(x)$	x	$f(x)$	x	$f(x)$	x	$f(x)$
-2	0	-4	2	-1	-1	-4	2
0	1	-1	-1	0	0	-2	-1
2	0	0	0	1	1	0	0
0	-1	-1	1	2	8	-2	1

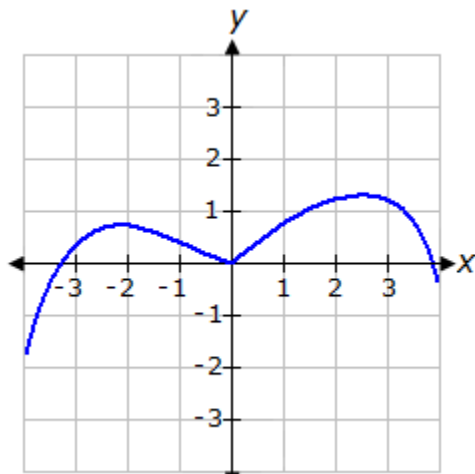
W. **X.** **Y.** **Z.**

- A. X
 - B. Z
 - C. Y
 - D. W
-

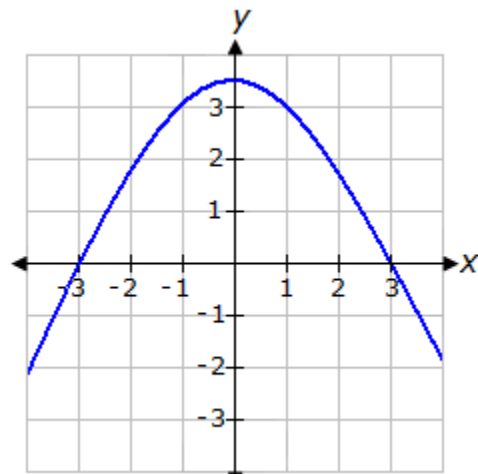
20. Which of the following relations describes a function?

- A. $\{ (-3, 9), (-2, 4), (2, 4), (3, 9) \}$
 - B. $\{ (2, -2), (0, 0), (2, 2), (3, 3) \}$
 - C. $\{ (-2, 0), (0, 2), (2, 0), (0, -2) \}$
 - D. $\{ (9, -3), (4, -2), (4, 2), (9, 3) \}$
-

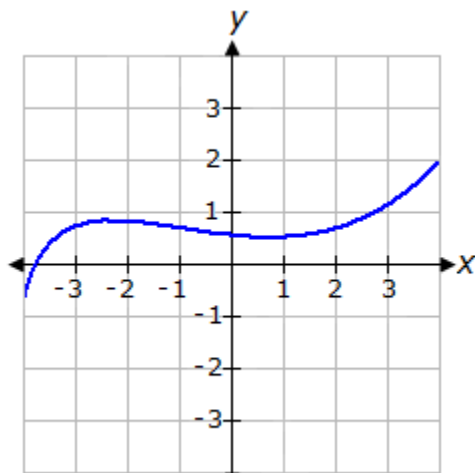
21. Which of the following graphs is not a function?



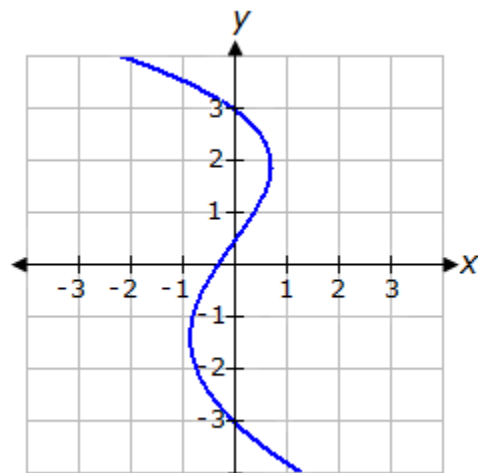
W.



X.



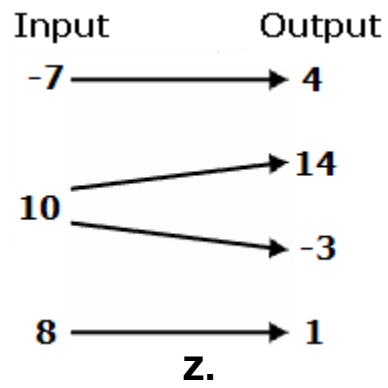
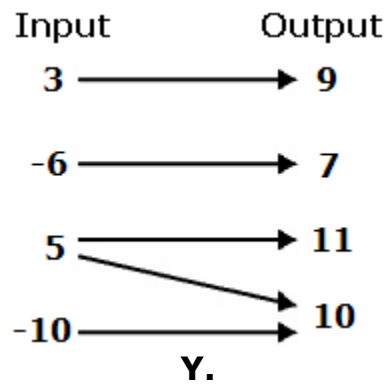
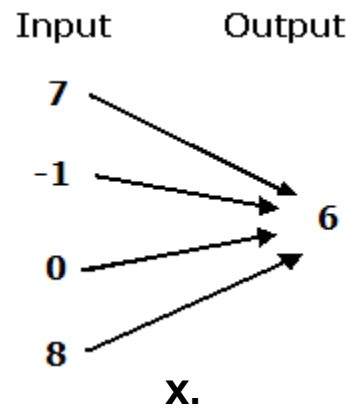
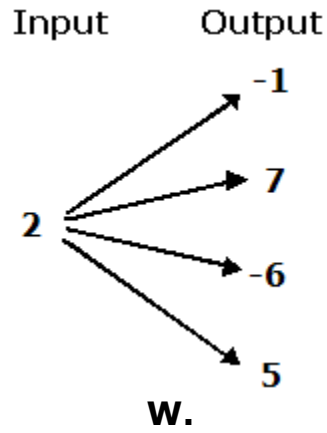
Y.



Z.

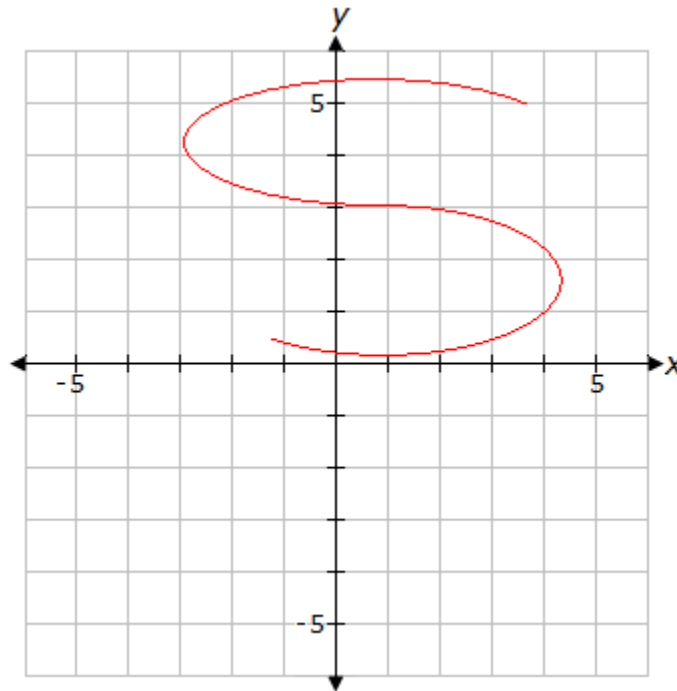
- A. W, X, Y and Z
 - B. Z
 - C. Y and Z
 - D. X and Y
-

22. Which relation diagram represents a function?



- A. Y
 - B. W
 - C. Z
 - D. X
-

23.



Determine whether this picture is an example of a function, relation, function and relation, or neither relation nor function.

- A. neither function nor relation
 - B. relation only
 - C. function only
 - D. function and relation
-

24. Do the ordered pairs below represent a relation, a function, both a relation and a function, or neither a relation nor a function?

$(-4,-3), (1,-8), (-4,-14), (9,-16)$

- A. function only
 - B. both a relation and a function
 - C. neither a relation nor a function
 - D. relation only
-