

STANDARD III: The student will be able to apply concepts related to functions.

OBJECTIVE

1. Identify functions.

ELIGIBLE CONTENT

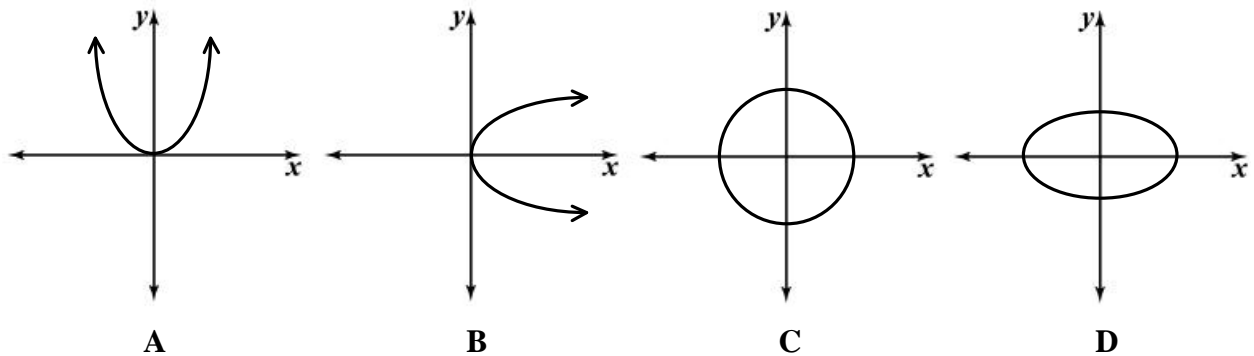
TIPS:
 "X" drives!
 "X" can only drive to ONE place.
 Other "X's" can drive to the same place of course.
 If even one "X" is "confused" ==> NOT a function.
 Use the Vertical Line Test if you have or know the graph.
 Hint: first degree equations are lines. All lines except vertical lines are functions.

- The options may be graphs, ordered pairs, tables, or mappings.
- The options may be equations when given a table of values or ordered pairs.
- The options may be tables of values or ordered pairs when given an equation.
- Functions may be expressed using either the terminology " $f(x) =$ " or " $y =$ ".

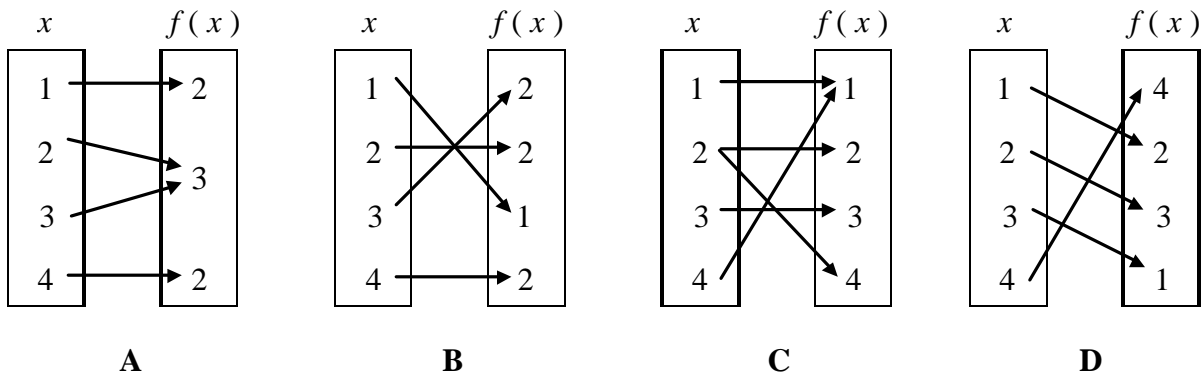
SAMPLE ITEMS

"a function of 'x'"
 ex) $y = f(x) = 2x + 3$

1 Which of these graphs represents a function?



2 Which of these mappings is NOT a function?



3 Which of these equations represents the data in the table?

x	y
1	-1
2	-5
-2	11

- A** $y = -4x + 1$
- B** $y = -4x + 3$
- C** $y = -2x - 5$
- D** $y = -2x + 11$

4 Which of these tables represents the function $y = -3x - 5$?

x	y
0	-8
1	2
-1	-2

A

x	y
1	-2
2	-11
-2	1

B

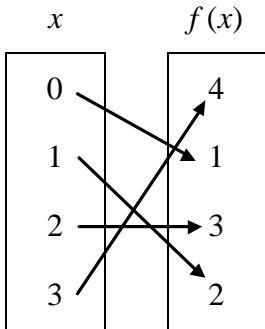
x	y
0	-5
1	-8
-1	-8

C

x	y
0	-5
1	-8
-1	-2

D

5 Which of these functions describes the mapping below?



- A** $f(x) = x + 1$
- B** $f(x) = x - 1$
- C** $f(x) = 2x + 1$
- D** $f(x) = 2x - 1$

6 Which of these tables represents the function $f(x) = |x| + 1$?

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

A

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

B

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

C

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

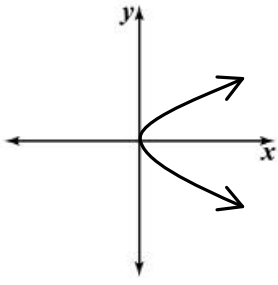
D

7 Which of the following relations describes a function?

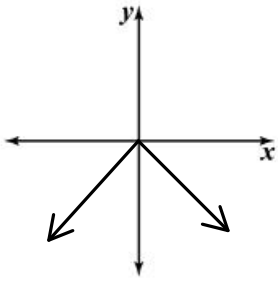
- A** $\{(-1, 3), (3, 6), (2, 5), (3, 9)\}$
- B** $\{(14, 44), (13, 44), (13, 35), (17, 69)\}$
- C** $\{(6, 13), (5, 5), (7, 16), (3, 13)\}$
- D** $\{(18, 18), (15, 20), (18, 19), (3, 9)\}$

8

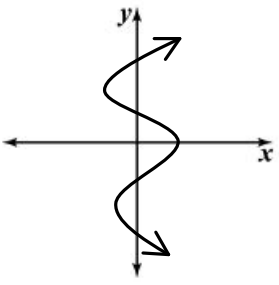
Which of these graphs represents a function?



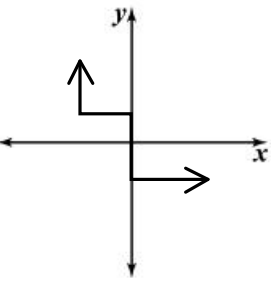
A



B



C



D

9 Which of these graphs does NOT represent a function?

