

AM Objective #3: Determine if relations are functions

1. Determine which relation is a function.

[A] 

x	1	2	3	4
y	3	6	9	12

*each x has only 1 y ✓*

[B] 

x	3	2	5	3
y	4	4	1	5

*No!*

[C] 

x	1	1	1	1
y	4	3	2	1


*No!*

[D] 

x	3	3	1	1
y	4	3	2	5

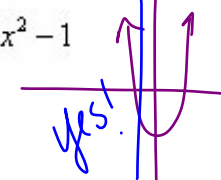
*No!*

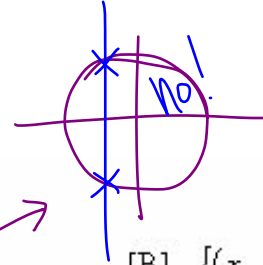
2. Which of the following is *not* a function?

[A]  $y = 2\sqrt{x}, x \geq 0$   *Yes!*

[B]  $\{(0, 2), (5, 3), (4, 2)\}$  *each x has only 1 y ✓*

[C]  $x = 2y^2 - 1$  *No!*

[D]  $y = 2x^2 - 1$   *Yes!*



3. Which of the following is a function?

[A]  $\{(x, y) \mid x^2 + y^2 = 25\}$

[B]  $\{(x, y) \mid x = y^2\}$

[C]  $\{(5, -6), (-2, -6), (4, -6)\}$

[D]  $\{(-6, 4), (-6, -3), (-3, 5)\}$

4. Determine if the relation is a function:

x	1	1	1	1
y	4	3	2	1

*No. The x-value 1 has 4 different y-values.*