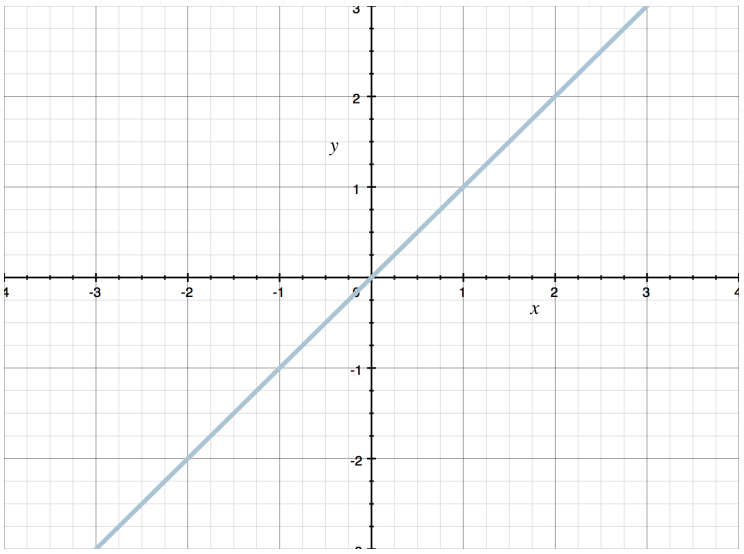
Topic: Testing for functions

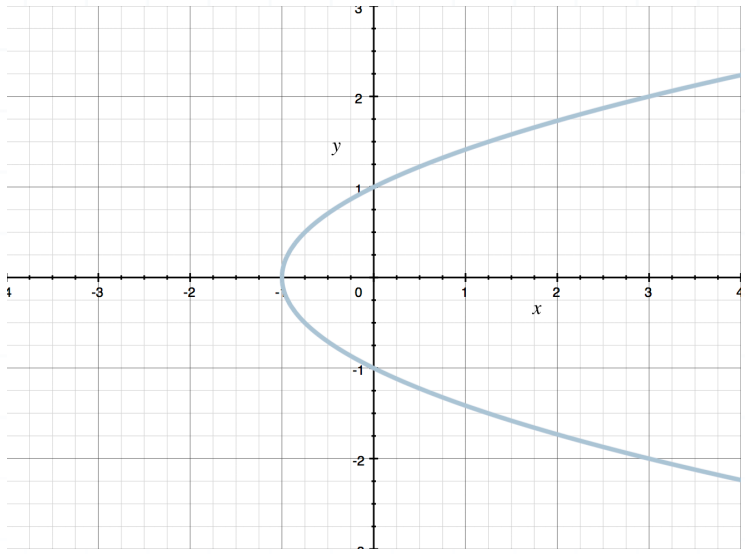
Question: Which graph represents a function?

Answer choices:

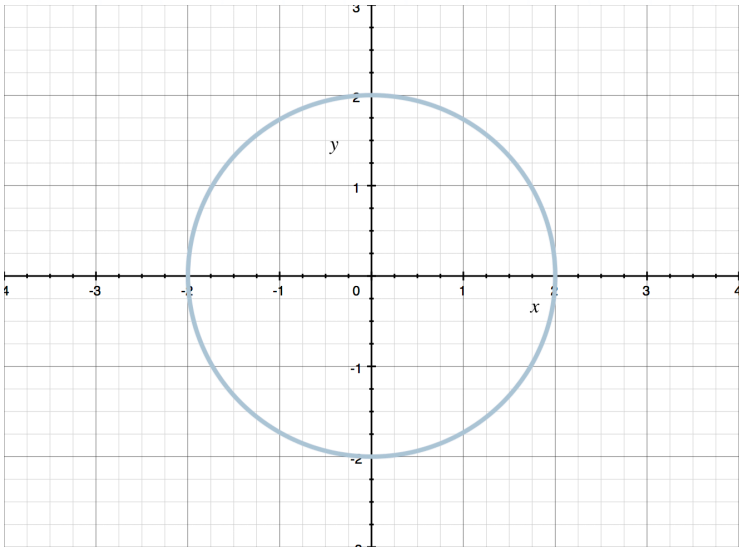
A



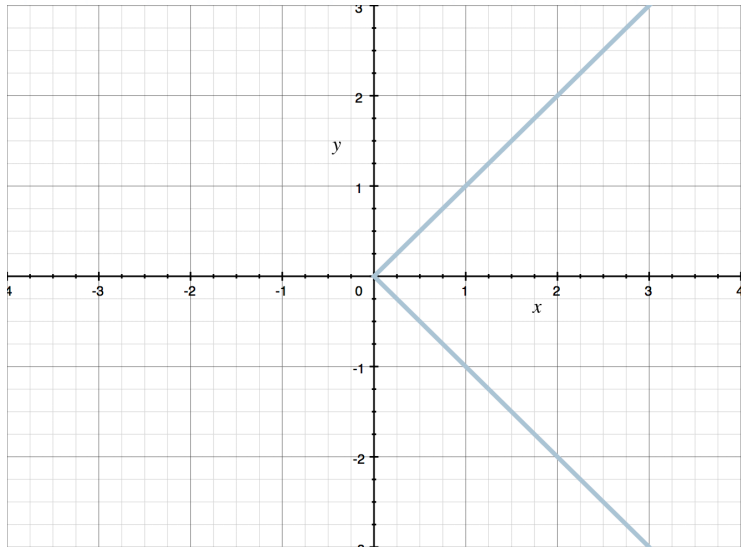
B



C



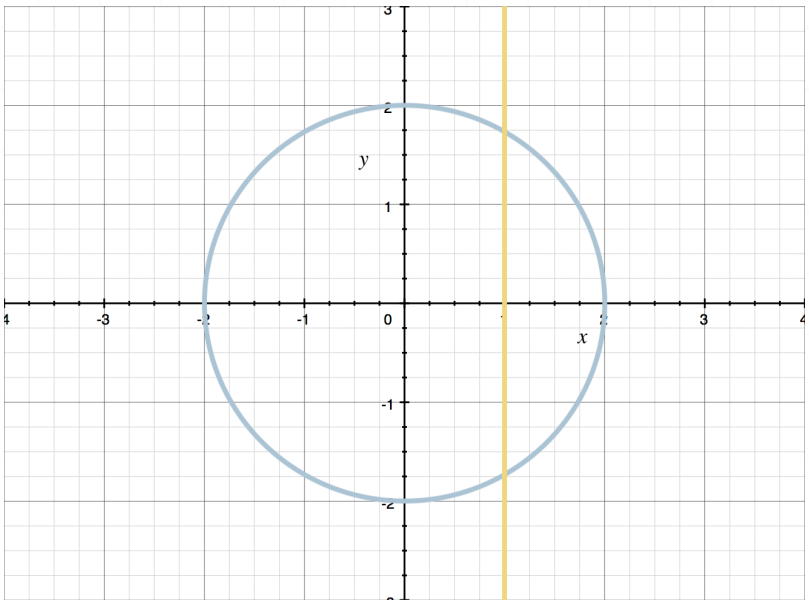
D

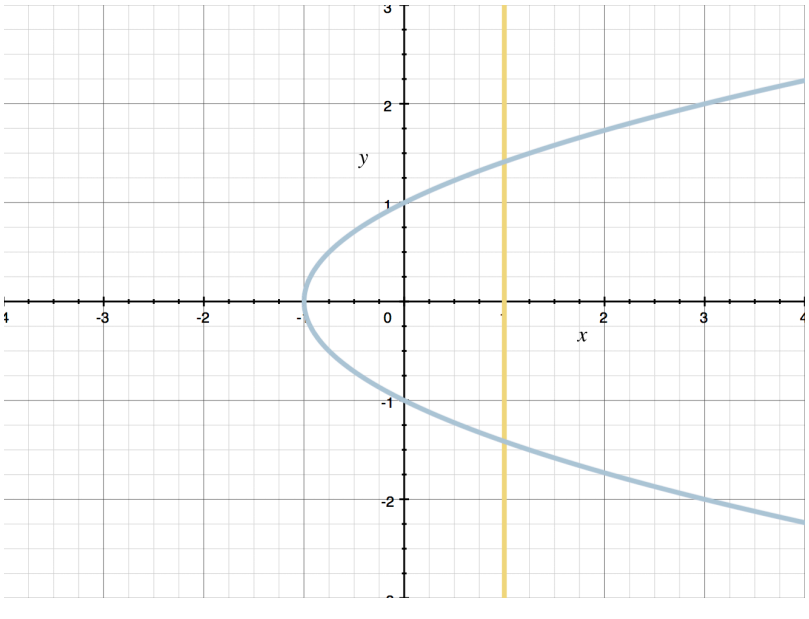


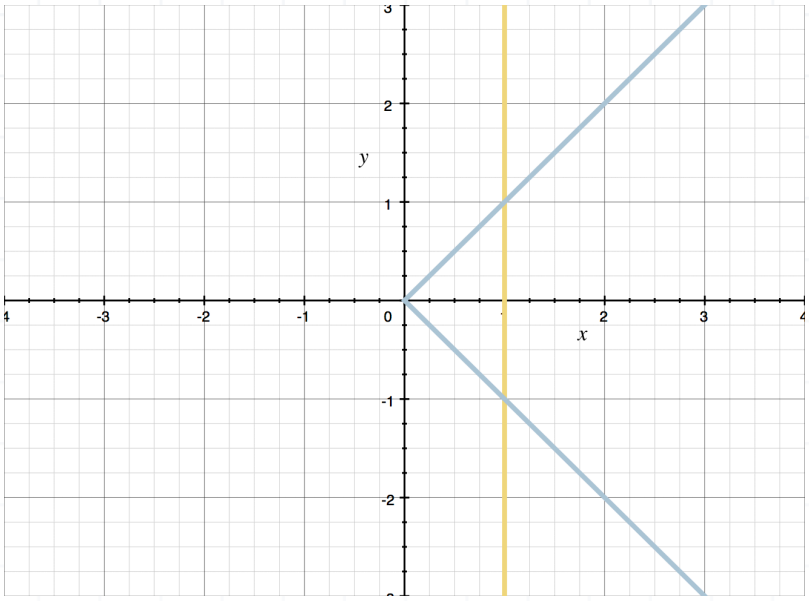
Solution: A

The graph in answer choice A represents a function. We know this because we can't draw a perfectly vertical line that crosses the graph in more than one place. Therefore, by the Vertical Line Test, the graph represents a function.

On the other hand, for each of the graphs in answer choices B, C, and D, we can draw a vertical line that crosses the graph in more than one place. Therefore, those graphs don't represent functions.





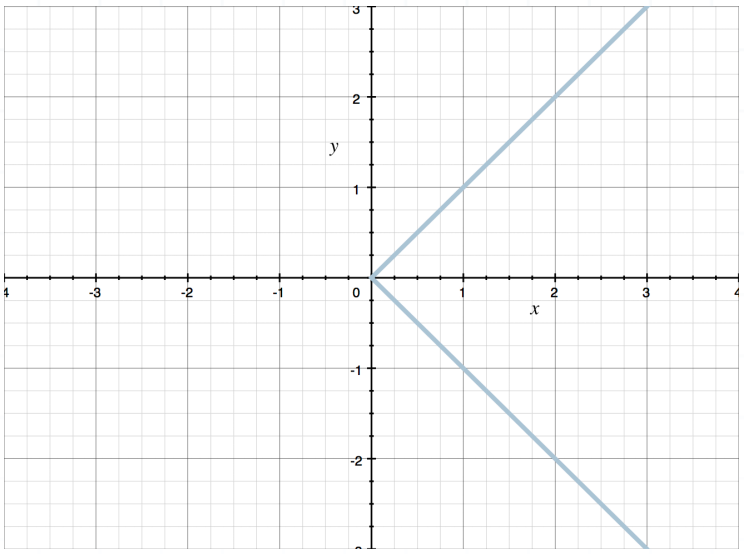


Topic: Testing for functions

Question: Which of these could represent a function?

Answer choices:

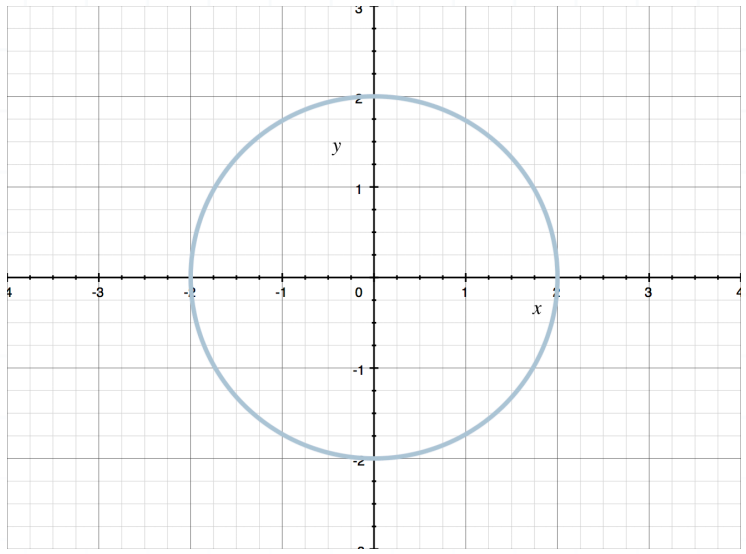
A



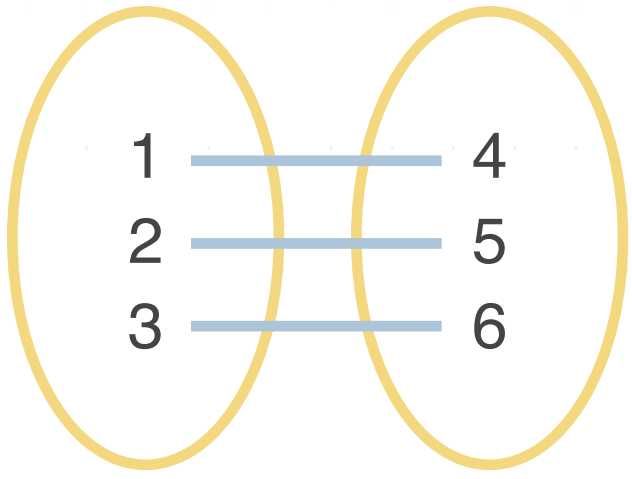
B

The relation whose graph consists of the points with coordinates $(1,2)$, $(1,3)$, and $(1,4)$.

C



D

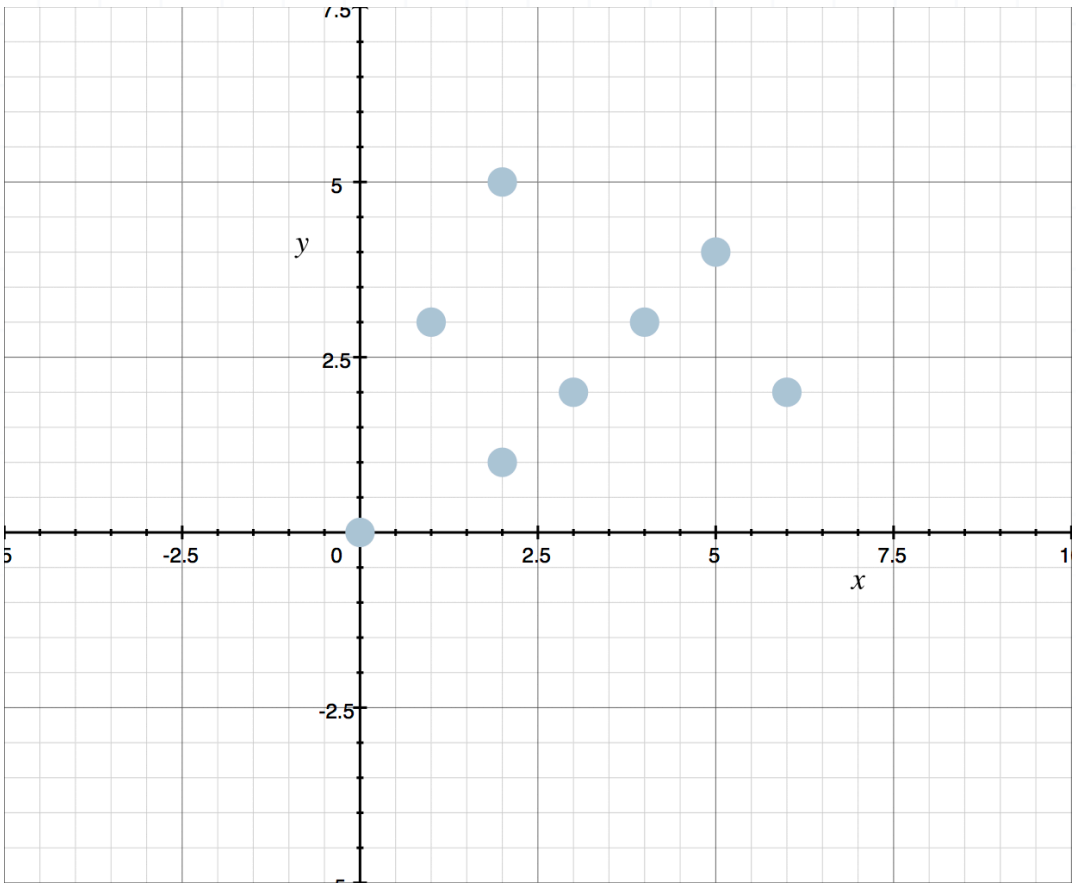


Solution: D

Answer choice D is the only one that could represent a function, because it's the only answer choice that shows only one y-value for every x-value.

Topic: Testing for functions

Question: This graph shows eight points that define a relation between x and y. Two of the eight points show that this relation is not a function. Which two points tell us this?



Answer choices:

A $(1,3)$ and $(4,3)$

B $(5,4)$ and $(2,1)$

C $(3,2)$ and $(6,2)$

D $(2,1)$ and $(2,5)$

Solution: D

If one x-value gives two different y-values, then the relation is not a function.

Answer choice D shows $x = 2$, $y = 1$ and $x = 2$, $y = 5$. In other words, the same x-value but two different y-values. Therefore, we know that the relation is not a function.

To double check, look at the graph and see that a vertical line can pass through $(2,1)$ and $(2,5)$. This also shows that $(2,1)$ and $(2,5)$ are the points that tell us this not a function.