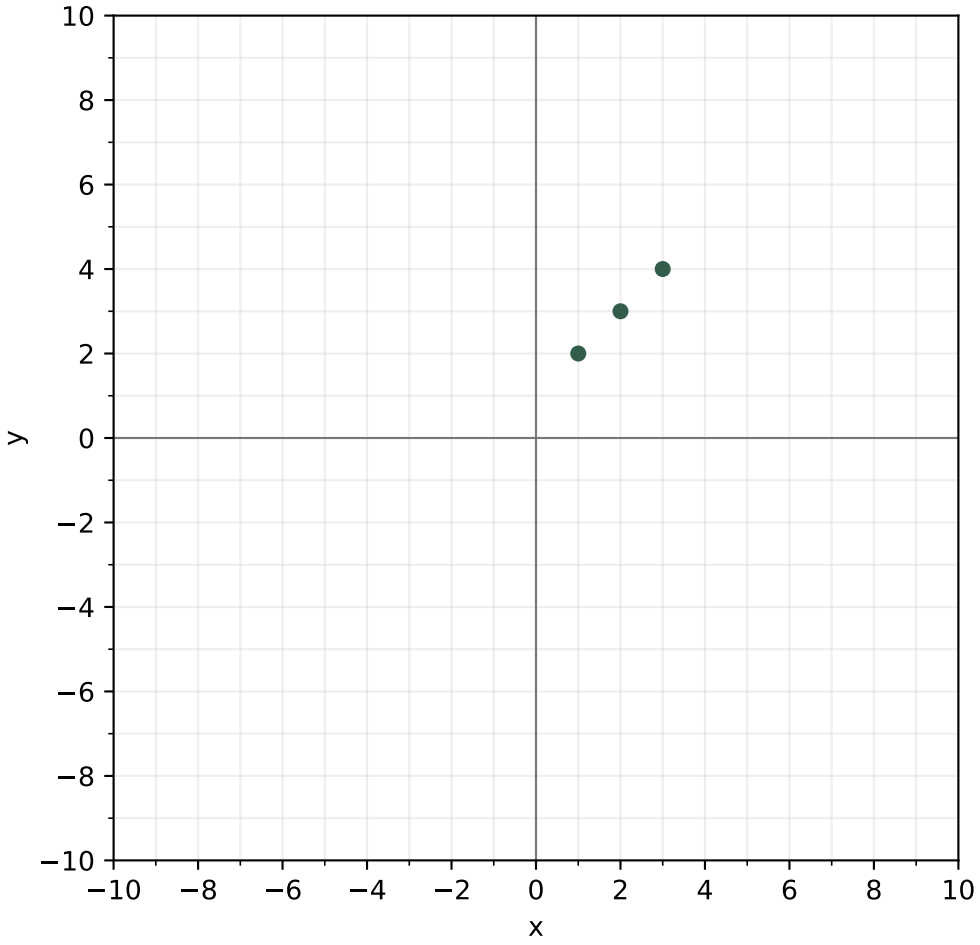
Identifying Functions with the Vertical Line Test

ANSWER / CASE 1

The displayed relation consists only of the four or three listed dots. Is it a function of x? Explain using the vertical line test. Points: [[1, 2], [2, 3], [3, 4]]

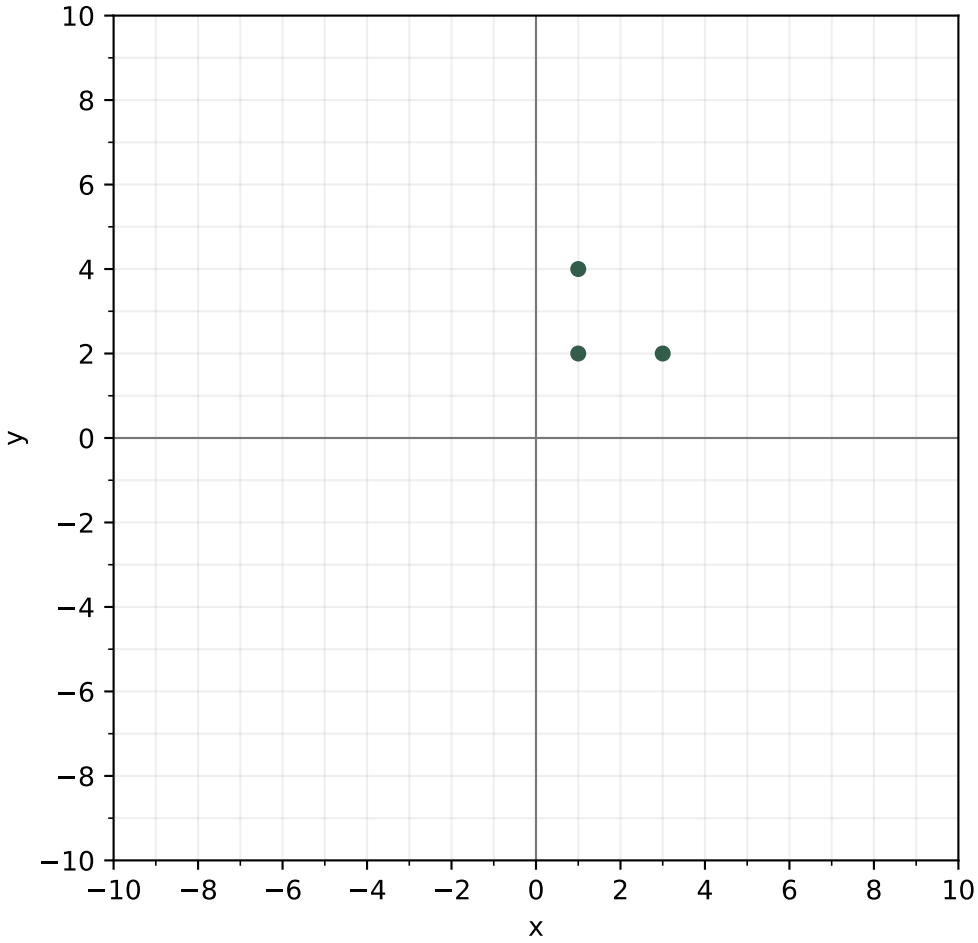


Yes. Each input x has exactly one output.
1. Compare the x-coordinates.
2. A vertical line may meet at most one plotted point for the relation to be a function.

Identifying Functions with the Vertical Line Test

ANSWER / CASE 2

The displayed relation consists only of the four or three listed dots. Is it a function of x? Explain using the vertical line test. Points: [[1, 2], [1, 4], [3, 2]]

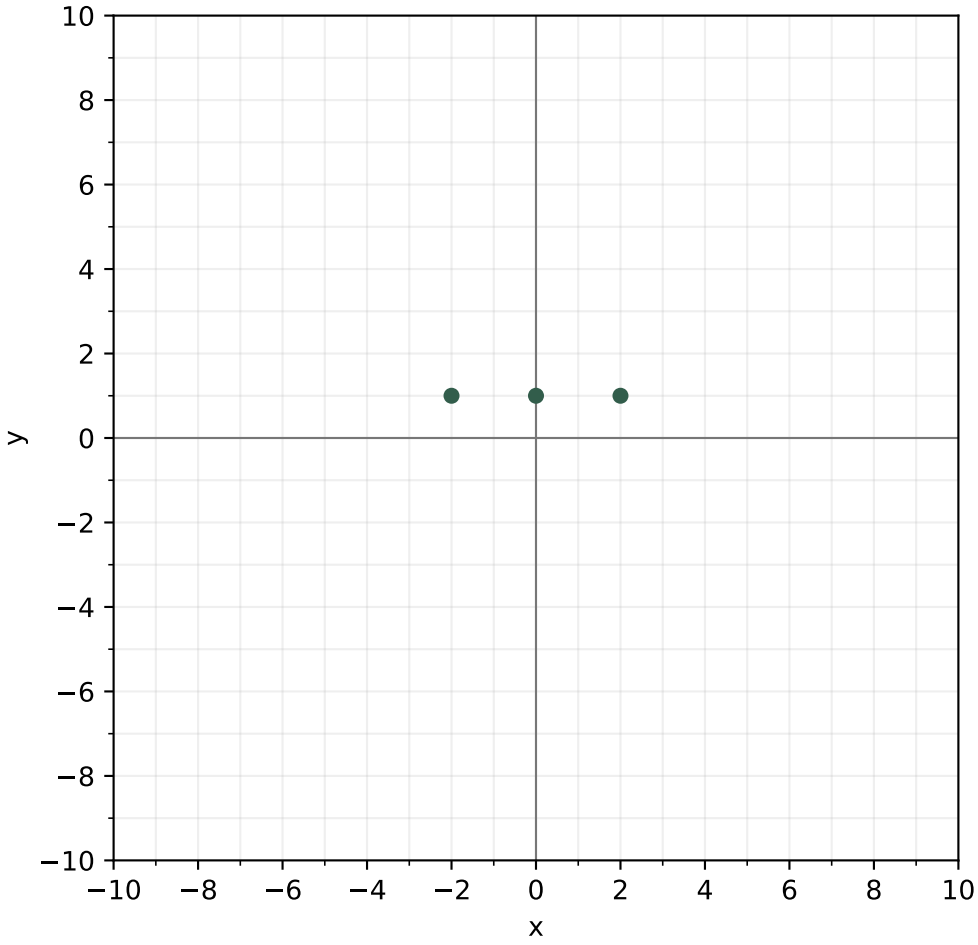


No. x=1 has two outputs: 2 and 4.
1. Compare the x-coordinates.
2. A vertical line may meet at most one plotted point for the relation to be a function.

Identifying Functions with the Vertical Line Test

ANSWER / CASE 3

The displayed relation consists only of the four or three listed dots. Is it a function of x? Explain using the vertical line test. Points: [[-2, 1], [0, 1], [2, 1]]

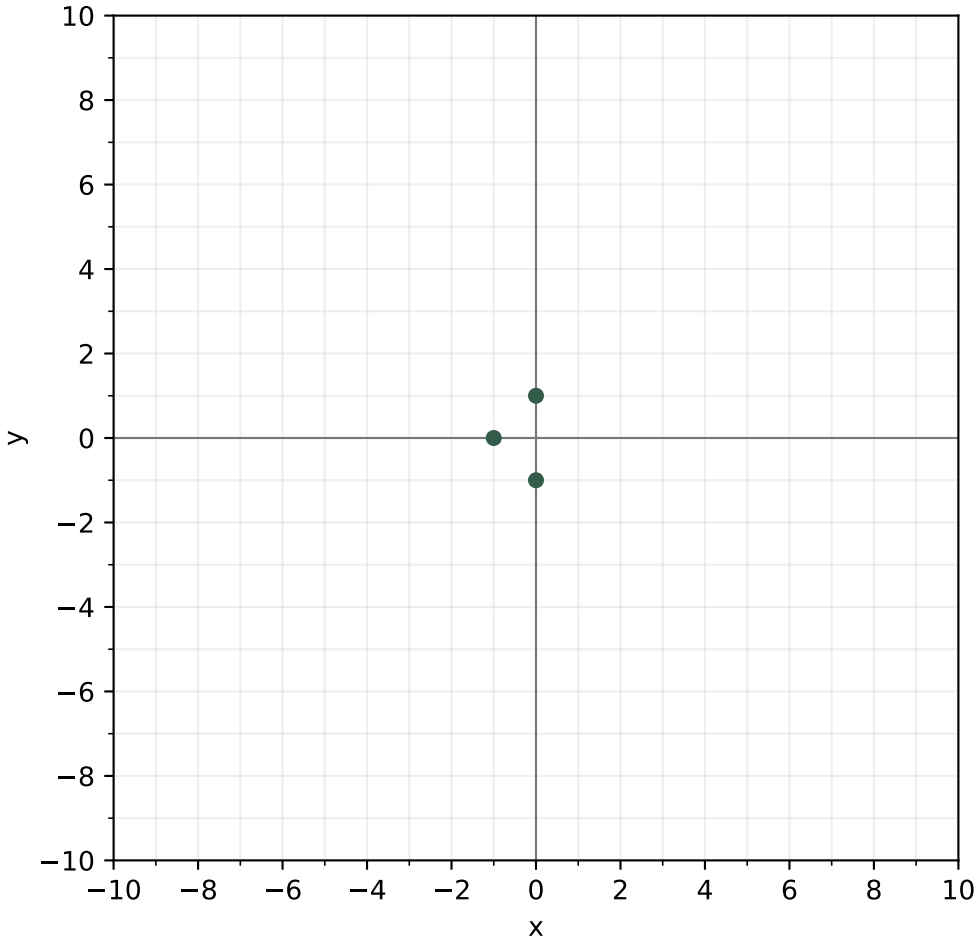


Yes. Different inputs may share the same output.
1. Compare the x-coordinates.
2. A vertical line may meet at most one plotted point for the relation to be a function.

Identifying Functions with the Vertical Line Test

ANSWER / CASE 4

The displayed relation consists only of the four or three listed dots. Is it a function of x? Explain using the vertical line test. Points: [[-1, 0], [0, 1], [0, -1]]



No. x=0 has two outputs: 1 and -1.
1. Compare the x-coordinates.
2. A vertical line may meet at most one plotted point for the relation to be a function.