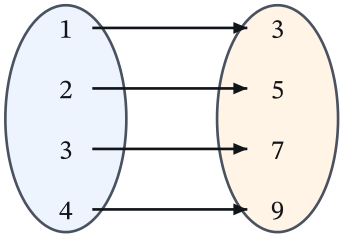
Names (pair) _____ Date _____

Functions and the Coordinate Plane

Example

x	1	2	3	4
y	3	5	7	9



Each number x is matched with **exactly one** number y. That is a function f. We write $f(2) = 5$: "the value of the function f at $x = 2$ is 5".

Remember

A function f matches each number x in its **domain** with **exactly one** number $f(x)$. The set of all values $f(x)$ is the **range**. The **graph** of the function is made of all the points $(x, f(x))$.

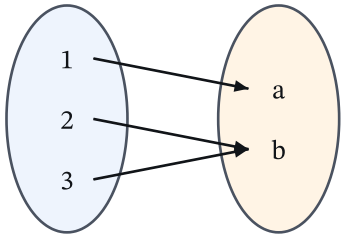
1 IN PAIRS Is it a function (exactly one y for each x)? Circle.

a)

x	1	2	2	3
y	4	5	6	7

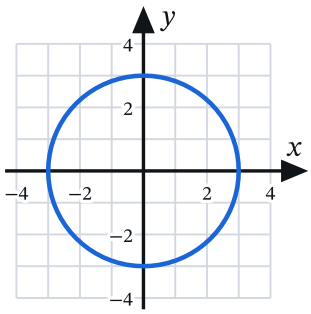
yes / **no**

b)



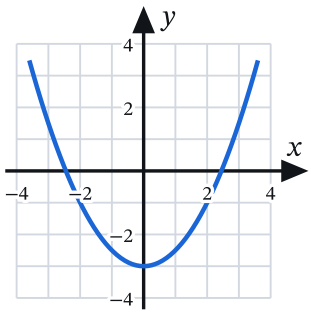
yes / **no**

c)



yes / **no**

d)



yes / **no**

e) Each student in the class is matched with their height. **yes** / **no**

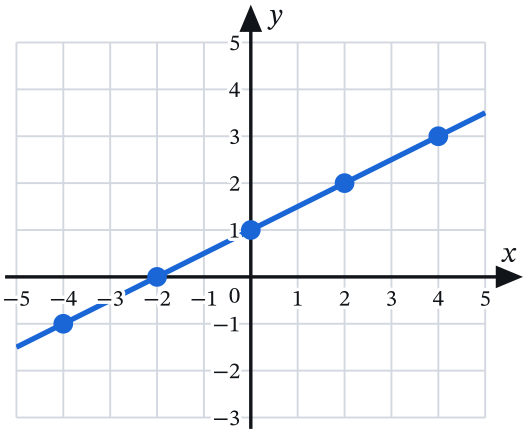
f) Each height is matched with a student of that height. **yes** / **no**

How can you tell from a graph that it is not a function?

_____

Names (pair) _____ Date _____

2 ON YOUR OWN The picture shows the graph of a function f. Read it.



$f(2) =$ ☐

$f(-2) =$ ☐

$f(0) =$ ☐

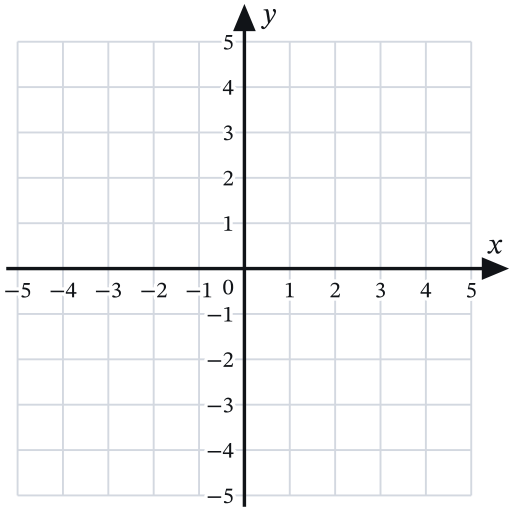
$f(x) = 3$ when $x =$ ☐

3 ON YOUR OWN For $f(x) = 2x - 1$, complete the table and plot the points $(x, f(x))$. What do you notice?

x	-2	-1	0	1	2
$f(x)$	☐	☐	☐	☐	☐

_____

_____



4 IN PAIRS **Find the mistake.** Luka reads the graph in task 2: "The point $(4, 3)$ is on the graph, so $f(3) = 4$." What is wrong?

_____

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Functions board: stretch a band through the points from task 3. Do they all lie on one line?

★ ON YOUR OWN **Exit card.** For $f(x) = -x + 4, f(-1) =$ ☐. Is the table x: 0, 1, 1; y: 2, 3, 4 a function? **yes** / **no**