

BE-1A | TUESDAY 1-4-11.

Simplify:

① $\frac{237}{3}$

② $\frac{576}{9}$

DEFINE:

③ RELATION

④ domain

⑤ range

-
- on time
 - Supplies
 - NEAT, properly labeled and SHOWN WORK.
 - fresh start

Divisibility Rule for 3 and 9

You ALREADY know the
divisibility rule for 2, 5, AND 10...

÷ by if

- 2 last digit is even which
 means it ends in 0, 2, 4, 6, 8
- 5 last digit is 0 or 5
- 10 last digit is 0
-

3 sum (add) of all the digits
 is ÷ by 3

(EX) 237 ⇒ sum is 12 which is ÷ by 3
 12 so 237 is ÷ by 3

9 sum of all the digits is ÷ by 9

(EX) 576 ⇒ sum is 18 which is ÷ by 9
 18 so 576 is ÷ by 9

Ch. 4-6 FUNCTIONS

*①

function

A RELATION in which
 EACH element of the
domain is paired with
 EXACTLY ONE element of
 the RANGE.

*②
 "X drives"

In other words, A set of ordered
 pairs of (x, y) values where EACH
 X CAN ONLY go with ONE unique Y.

③ EX

X	Y
1	4
2	5
3	6

FUNCTION

X	Y
1	4
1	5
3	6

NOT A
 FUNCTION

It is OK for different X VALUES to go to the same Y VALUE:

X	Y
1	4
2	4
3	4

FUNCTION

X	Y
4	1
3	1
4	6

NOT A FUNCTION

FUNCTION (Yes or No, if No... why?)

Ⓐ $\{(3, -6), (4, 2), (5, 3), (7, 8)\}$

Ⓑ $\{(-1, 5), (-1, 8), (-2, 7), (0, 6)\}$

Ⓒ $\{(3, -2), (-1, -2), (4, 1)\}$

Function (Yes or No, if No... why)?

Ⓐ

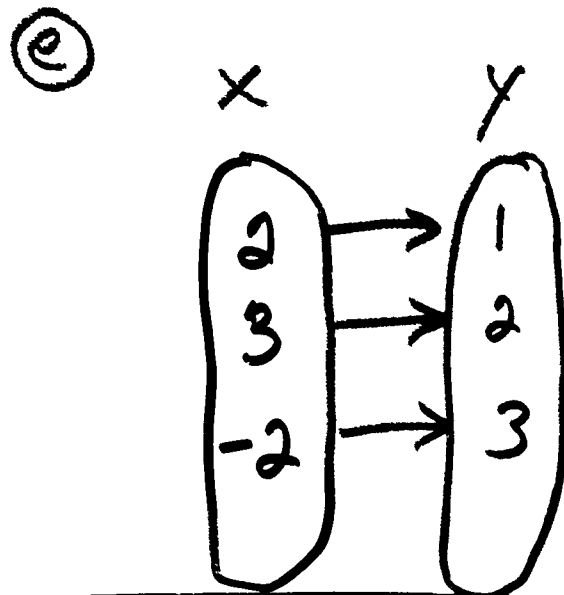
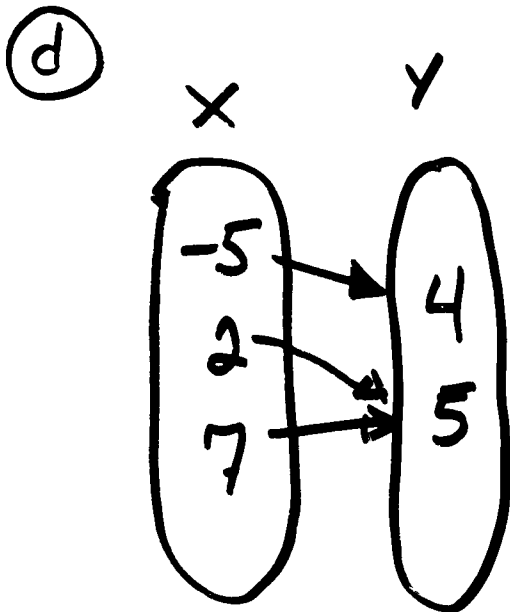
X	Y
-3	5
0	0
4	4

Ⓑ

X	Y
-1	4
1	4
-1	4

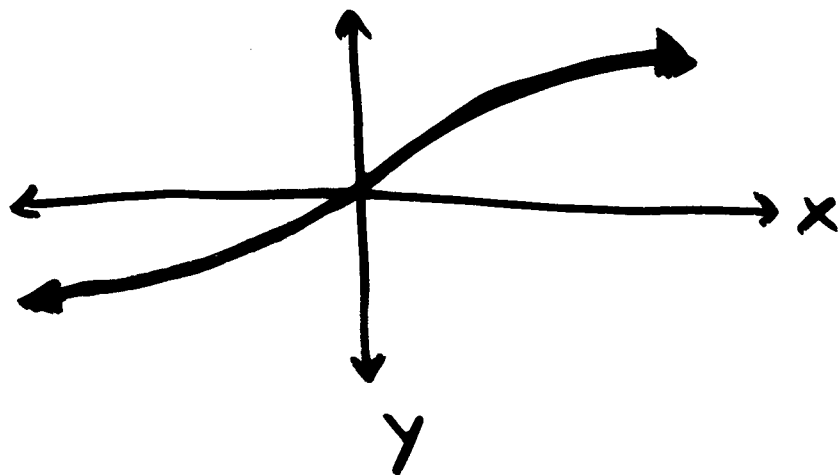
Ⓒ

X	Y
1	0
5	1
1	2



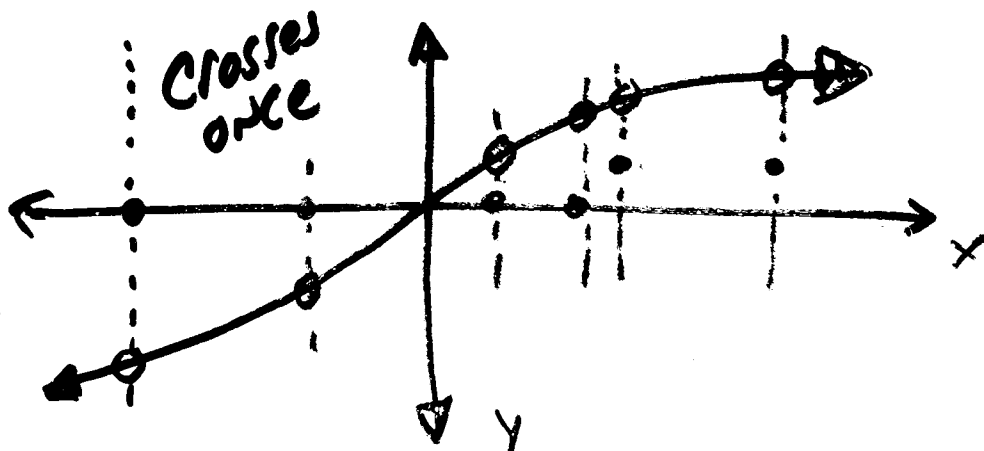
Can you tell by looking at a graph if it is a function?

⊗ EX Function (Yes or No?)



PICK AN IMAGINARY x ON THE FAR LEFT
(SOME VERY LARGE NEGATIVE x) AND DRAW
AN IMAGINARY VERTICAL LINE — DOES
IT CROSS THE GRAPH ONCE (FUNCTION)
OR MORE THAN ONE (NOT A FUNCTION).

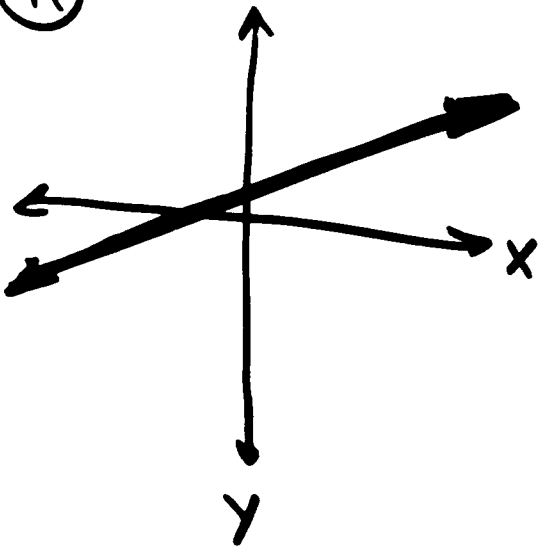
CONTINUE TO RIGHT, ANY NO'S, EVEN ONE, \Rightarrow
(NOT A FUNCTION)



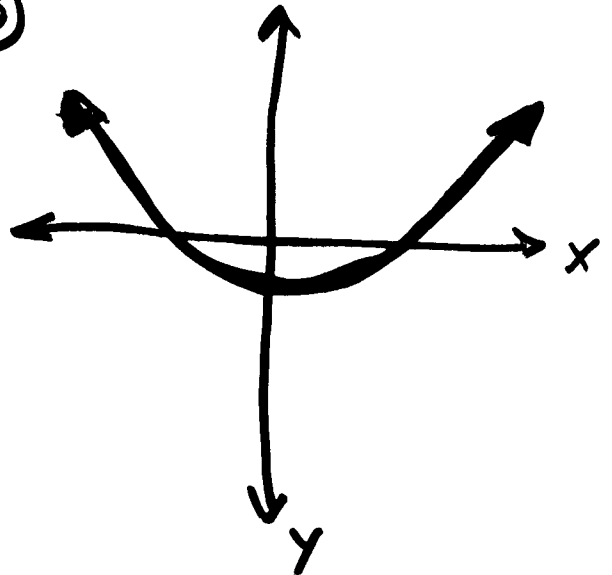
THE GRAPH test for a function ^(6.)
is called the Vertical Line Test

FUNCTION (Yes or No, If No, why not)

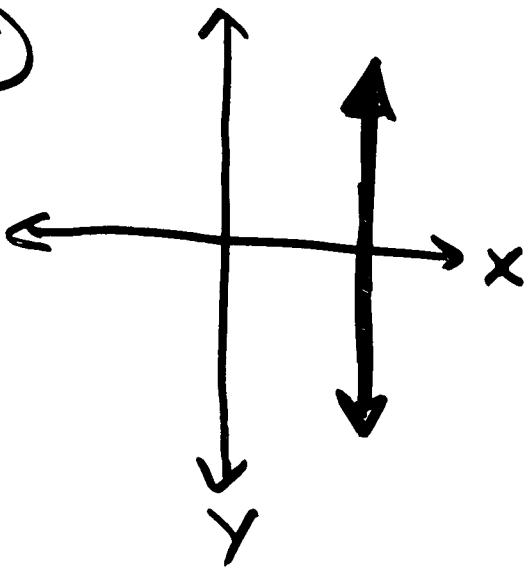
(A)



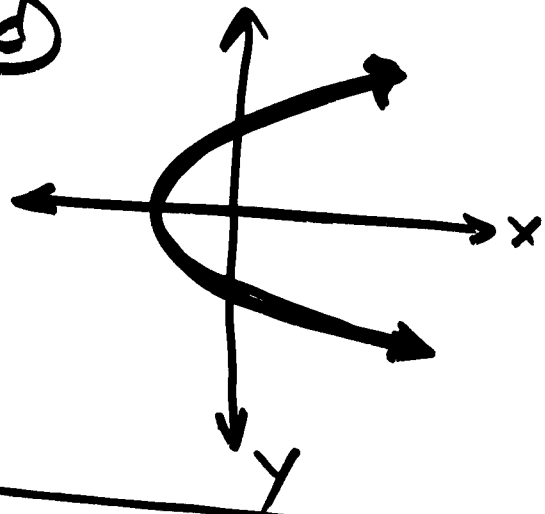
(B)



(C)



(D)



Homework: • Read Ch 4-6

• Pg 228-229 # 3-9 $\left\{ \begin{array}{l} \text{if NOT,} \\ \text{WHY} \\ \text{NOT} \end{array} \right.$