

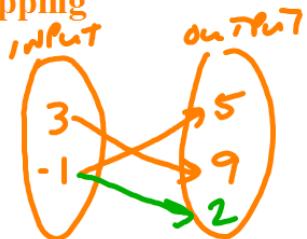
Chapter 1 Test results

Ways to show relations

Ordered Pairs

$(3, 9)$ (x, y)
 $(-1, 5)$ $(\text{input}, \text{output})$
 $(-1, 2)$

Mapping



Domain/Range lists

x y

$$D = \{3, -1\}$$

$$R = \{5, 9, 2\}$$

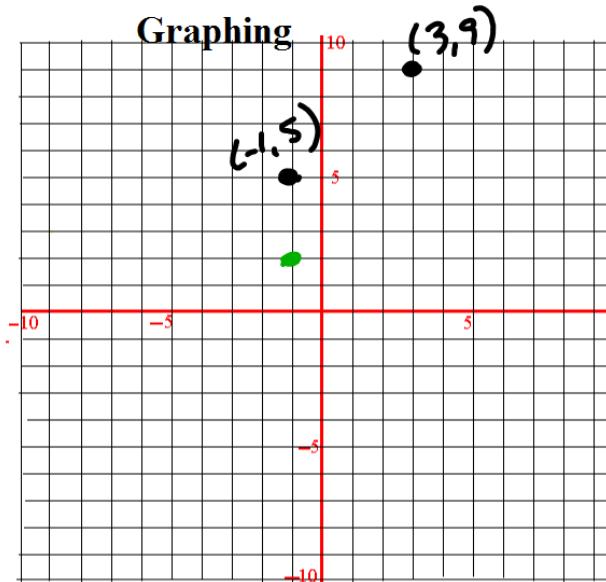
Table

vert	x	y
3	9	
-1	5	
-1	2	

hori_z

x	3	-1	-1
y	9	5	2

Graphing



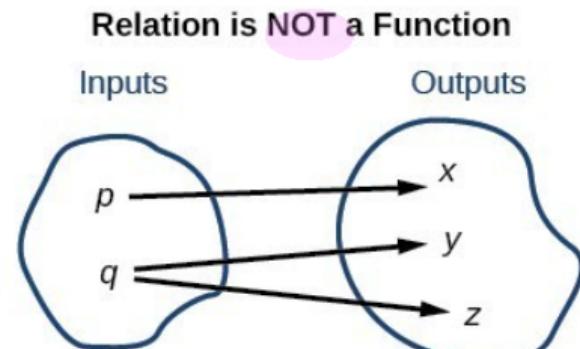
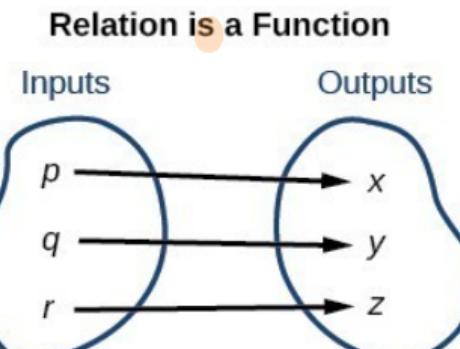
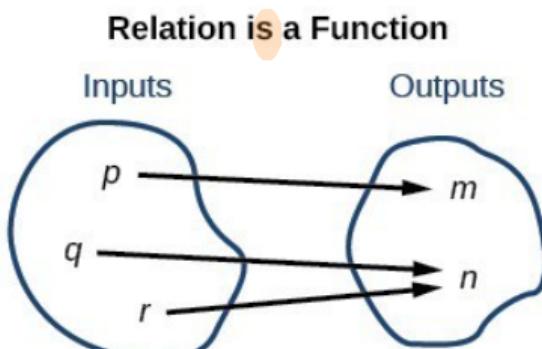
2.1: Relations & Functions

Train	Destination
A	Office
B	800's
C	400's
D	600's
E	Resource Center
F	Office

467

Functions are special kinds of relations

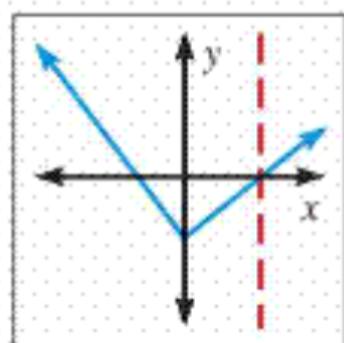
- ~ Functions can't have the same train go to 2 different destinations
- ~ or an arrow can't hit the target in 2 different spots



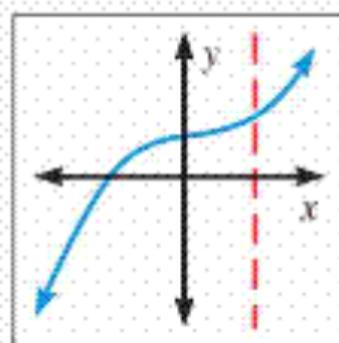
(a)

(b)

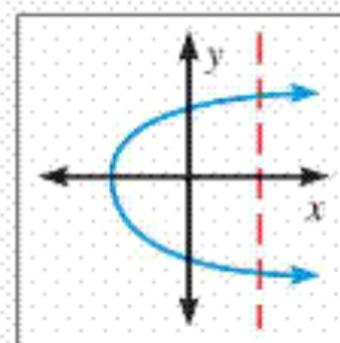
(c)



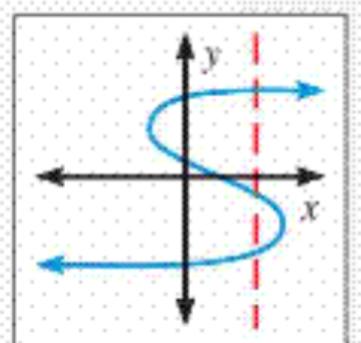
function



function



not a function



not a function

Instead of a list of ordered pairs, functions can be defined using equations

$$y = 2x + 5$$

$$f(x) = 2x + 5$$

$$y = -3x + 7$$

$$g(x) = -3x + 7$$

$$x = 2$$

$$\downarrow \\ g(2)$$

Function Notation

- ~ "names" the functions and
- ~ tell what variable is being used

$$f(x) = -4x$$

$$g(x) = 7x - 1$$

$$h(x) = 2x^2 + 3$$

$$g(z) = 13$$

$$\begin{aligned} f(x,y) &= 2xy + 5 \\ f(2,1) &= \end{aligned}$$

Math Practice:

p64(11-29,35)

**ignore directions for
one-to-one/onto/both/neither**