Problem of the Day: State the independent and dependent variable.
Brad is charged $30 for each gigabyte of data used.
Plan for the Day:
Collect signed tests and weekly homework
Notes on functions
More practice with functions
Objective: We will be able to determine if a relation is a function.
Happy Birthday to Daniel Arce!!
Good luck to Football and Volleyball at Mexia!!

Function- special type of relation where each element of the domain is paired with exactly one element from the range.

In other words, each x can only have one y.

no Cheating x's

Can use mapping, tables, and graphs to see if the relation is a function since each x value should have only one y-value

Example 1: Determine if the following are functions.

a. {(2, 3), (3, 0), (5, 2), (-1, -2), (4,1)} (2,-4)

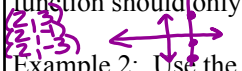
function- no cheating x's

b.

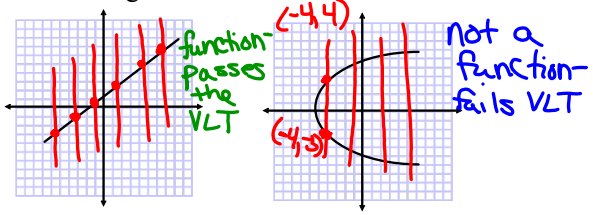
x	y
4	-1
5	2
6	5
5	5
4	3

not a function- 4 and 5 are cheating x's

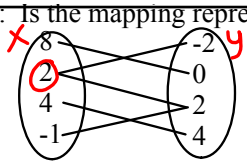
Vertical Line Test- VLT
-first you must graph the relation
-the Vertical Line Test says that the graph of a function should only touch vertical lines once



Example 2: Use the vertical line test to determine if the following are functions.

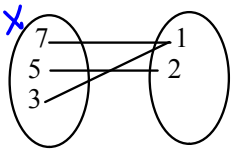


Example 3: Is the mapping representing a function?

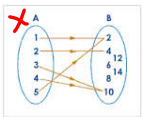


not a function- 2 is a cheating x

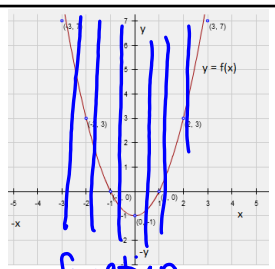
Example 4:



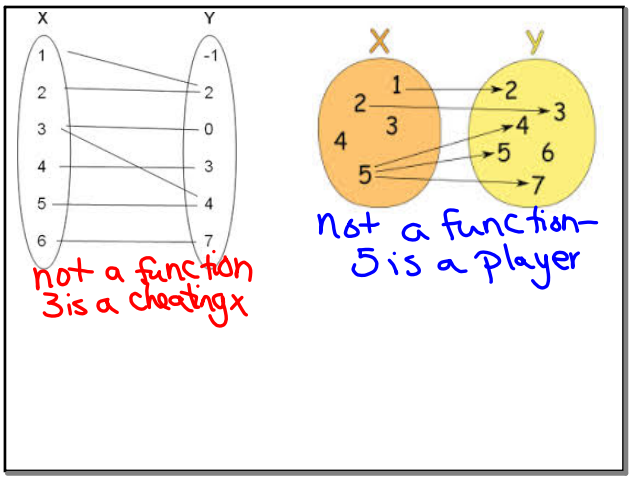
function- no cheating x's



function- no cheating x's



function- passes VLT


X
Y
1
2
3
4
5
6
-1
2
0
3
4
7
not a function
3 is a cheating x
X
y
1
2
3
4
5
2
3
4
5
6
7
not a function–
5 is a player