State all the subset(s) of the Real #'s to which each

$\sqrt{15}$

Irration

because
isn't a perf
square th
would give
decimal th
doesn't rep
or termina

$\frac{736}{-16}$

Ration
(it's alreac
a fractio

since it rea
equals -
it's also a
Interge
But since i
negative i
not a Wh
or Natural

$5.4\overline{3}$

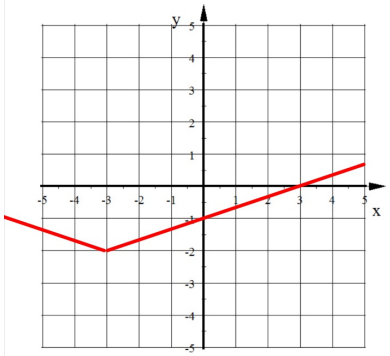
Ration
(it's a
repeati
decima

But it's r
an Integ
Whole #.
Natural # c
to it's decin
portio

7.63

Ration
(it's a
terminati
decima

But it's r
an Integ
Whole #.
Natural # c
to it's decin
portio



Write the equatior
this functio

Vertex is (-2,-3) → moved 2 left

Opens

Sides have a slor 1/3

EQ $y = \frac{1}{3}|x+2|-3$

Sec 2-1: Relations and Fur

Sec 2-1: Relations and Functions

Relation

A set of ordered pairs

(a bunch of points)

Function

A kind of relation where each x is paired with one and only one y.

Each input produces only one output

Which of the following is correct?

1. Every Relation is a Function

2. Every Function is a Relation

Domain
- x-coordinat
- Inpu
- Independent Varia

• Left & RT

Range
- y-coordinat
- Outpu
- Dependent Varia

• up & down

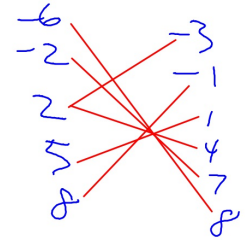
Mapping Diagr

(5,1), (-2, 7), (2, -3), (8, -1), (2, 4), (-6, 8)

1. List the Domain and (list all x & y coordinates in order without rep

2. Connect each member of the Domain with its correspo the Rang

Domain: Range:



Is this Relation a func NO

If any domain value has more than one line coming from it then the relation is NOT a function

since the domain value 2 connects to b values -3 and 4 this relation is NOT

2. Tell if each of the following is a Function or Not a Function.

a) $(4,3),(3,-9),(6,1),(-6,3)$

Yes No x-value rep

b) $(-5,-2),(11,-1),(-5,6),(8,4)$

NO the x-value of -5 appears more th

Is each of the following relations a function?

a) $(1,3),(2,3),(-4,-1),(5,5)$

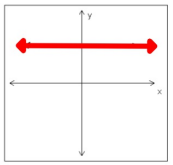
Yes, no x-value rei

b) $(-7,4),(-1,9),(9,3),(-1,6)$

No, the x-value -1 appears more t

Is each a functi

a



What is the Vertical Line Test?

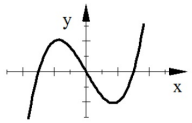
A test to see if a graph represents a function

If any vertical line intersects a graph more than once the graph is NOT a function.

Therefore this graph is a function b
vertical line will intersect it more t

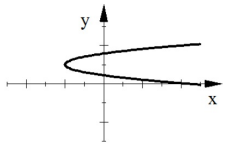
Tell if each of the following is a Function or Not a Function.

c)



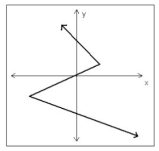
YES
no vertical line will inters
graph more than

d)



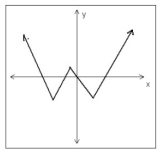
NO
there is at least one v
line that will intersect th
more than or

b.



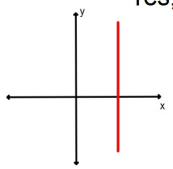
Not a function

c.



Yes, this is a function

d.



Not a function