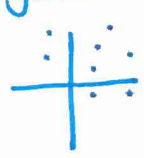


# Quiz Notes

## Vocabulary

- a relation is a relationship between two variables  
 → a function is a specific relation where for each input there is only ONE output
- domain is all possible x-values
- range is all possible y-values
- discrete is a plot of points (you have to pick up your pencil) ex 
- continuous is a line (you can draw the graph without picking up your pencil)

## is this a function?

### charts

\* no doubling w/ x-values

x	y
-1	3
0	4
1	4
2	5

✓ function

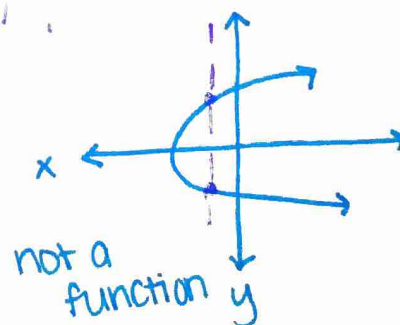
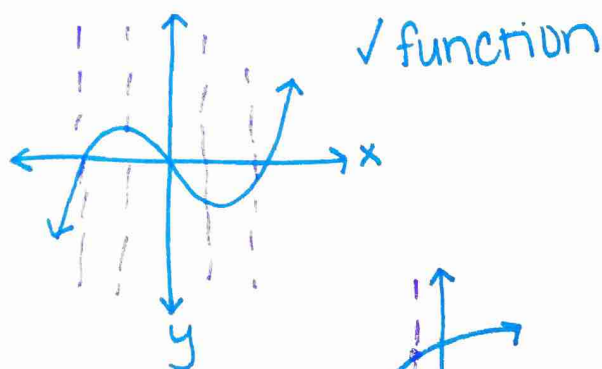
x	y
-1	0
0	4
2	9
-1	4

not a function

doubles in the y-values is ok

### graphs

\* use the vertical line test (should not hit the graph more than once)



dependent variable  $\rightarrow x$   
 independent variable  $\rightarrow y$

domain & range

charts / discrete graphs

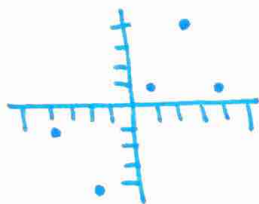
- list x-values & y-values using  $\{ \}$
- no repeats

**ex1**  $\{(0,4), (2,7), (9,1), (2,8)\}$

D:  $\{0, 2, 9\}$

R:  $\{4, 7, 1, 8\}$

**ex2**

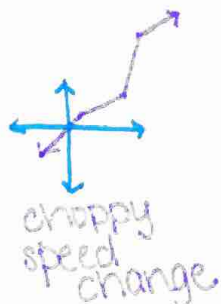
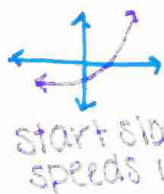
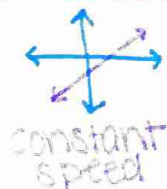


D:  $\{-4, -2, 1, 3, 4\}$

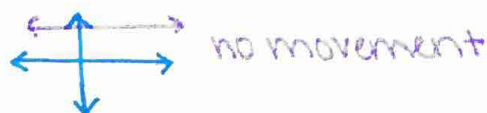
R:  $\{-4, -1, 1, 4\}$

explaining graphs

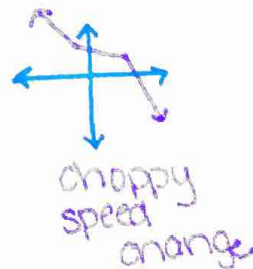
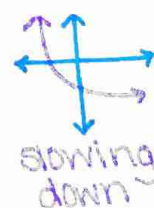
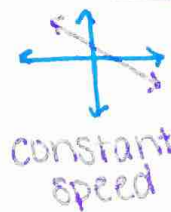
increasing



no speed



decreasing

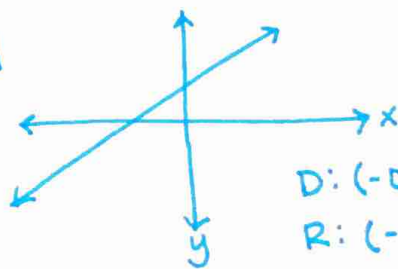


continuous graphs

- using interval notation, lowest, highest with  $[ ]$  or  $( )$
- $[ ] \rightarrow 0, \leq, \geq$
- $( ) \rightarrow 0, \infty, -\infty, <, >$

- domain look  $L \rightarrow R$
- range look  $B \rightarrow T$

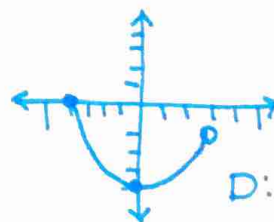
**ex1**



D:  $(-\infty, \infty)$

R:  $(-\infty, \infty)$

**ex2**



D:  $[-4, 3)$

R:  $[-4, 0]$  \*B-T\*