2/11/19 Notes

Study Skill Lesson → powerpoint sent to Students.

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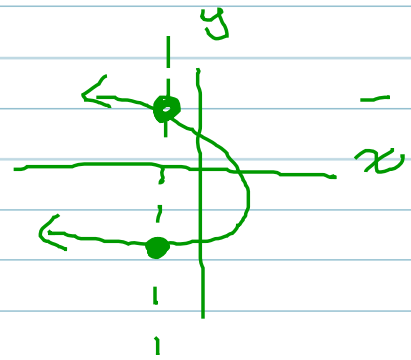
3.2 The Graph of a Function (lecture notes 36-38

Identify the graph of a function

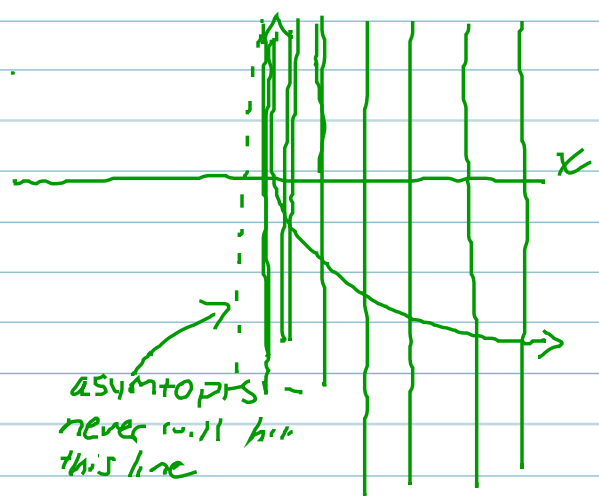
- vertical line test -
  - intersects the graph more than once then the graph is not a function

graph c



- not a function

graph d.



- is a function

if the curve is always approaching and never changing. will never be vertical so it is a function

pg. 37

a graph is a relation connecting input to output.

#4 a) what is $f(-14)$

$f(x)$

x is -14

b) what is $f(6)$, approximately?

≈ -2.5

means approximately

inputs x	f	outputs $f(x)$	
$-14 \rightarrow$		$\rightarrow -4$	$f(-14)$
$6 \rightarrow$		$\rightarrow -2.5$	$f(6)$
$-6 \rightarrow$		$\rightarrow 6$	$f(-6)$
-12		$\rightarrow 0$	
-2		$\rightarrow 0$	
8		$\rightarrow 0$	
-14		$\rightarrow 4$	
4		$\rightarrow 4$	
-6		$\rightarrow 6$	

c) $f(-6)$ positive or negative

$=$ positive

d) 3 values of x is $f(x) = 0$

$y = 0$

$= -12, -2, 8 = x$-intercepts

$\rightarrow$ horizontal line on x-axis

e) $f(x) = 4$

$= -14, 4$

f) $f(x) = 6$

$= -6$

Pg. 38

Domain = input = x-coordinates

Range = output = y-coordinates

practice

graph B.

[ ] - include

( ) - exclude

Domain

$[-\pi, \pi]$

Range

$\left(\frac{\pi}{2}, -1\right)$ $\left(-\frac{\pi}{2}, 1\right)$

$[-1, 1]$

if a graph goes to the edges of the grid w/ no closed dot indicating stop, assume an arrow and must cont.

graph a

Domain

$= (-\infty, -3] \cup [3, \infty)$

Range $(-\infty, \infty)$

graph C

Domain

$(-\infty, 2]$

Range

$(-\infty, \infty)$

graph d.

Domain

$(0, \infty)$

excluded

Range - $(-\infty, \infty)$