10/2 Algebra I - Downing

Find Domain + Range and is it Linear?

1.)

x	3	5	9	17
f(x)	6	3	-3	-15

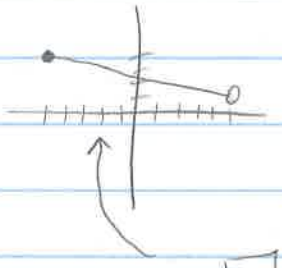
(+2, +4, +8 between x; -3, -6, -12 between f(x))

$\frac{-3}{2} = \frac{-6}{4} = \frac{-12}{8}$ Constant change makes it Linear

D: {3, 5, 9, 17}

R: {6, 3, -3, -15}

2)



D: $\{-5 \leq x < 5\}$

R: $\{1 < y \leq 4\}$

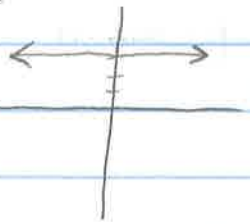
Linear - it is a straight line

3) find f(-2) = 3

Horizontal and Vertical Lines

Slope = $\frac{\text{rise}}{\text{run}}$

Horizontal

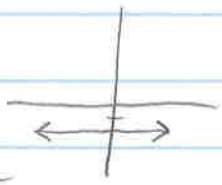


slope = $\frac{0}{\text{run}} = 0$

$y = mx + b$

$y = 0x + 3$

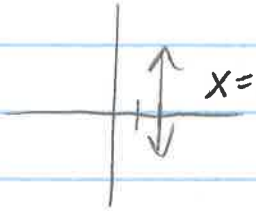
$\boxed{y = 3}$



$\boxed{y = -2}$

$\boxed{y = 5}$

Vertical



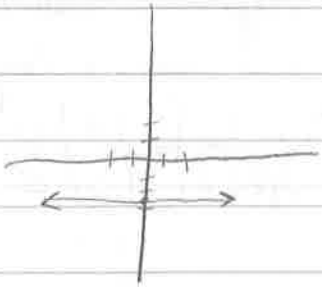
$x = 2$

slope = $\frac{\text{rise}}{0}$ = undefined

HOY-VUX

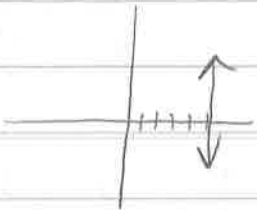
Horizontal
0-Slope
$y = \#$

1. $y = -2.5$

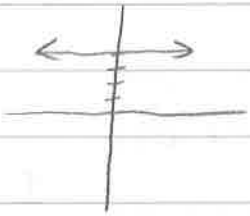


Vertical
Undefined
$x = \#$

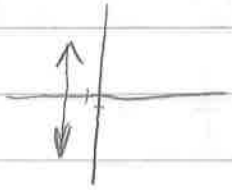
2. $x = 5$



3. $y = 4$



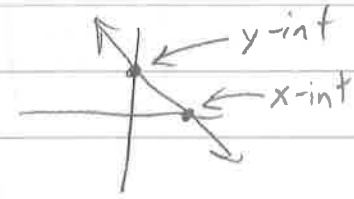
4. $x = -2$



Standard Form of a Linear Equation

$Ax + By = C$

STU Notes Worksheet



Using Intercepts to graph equations

- x-int of a graph is the x-coordinate of a point where the graph crosses the x-axis. It occurs when $y = 0$
- y-int of a graph is the y-coordinate of a point where the graph crosses the y-axis. It occurs when $x = 0$

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