

## Unit 2.1 Relations + Functions

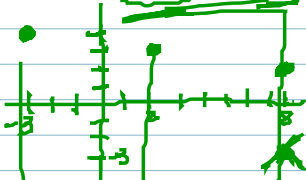
Domain - input (x-values) Discrete - points

Range - output (y-values) Continuous - line

Ex #1.  (2, 3) (8, 2) (-3, 4)

$$D = \{2, 8, -3\}$$

$$R = \{3, 2, 4\}$$



function - passes vert. line test  
 Not a func. - fails vert. line test

Ex #2 

x	-1	0	2	3
y	4	2	2	1

 (-1, 4) (0, 2) (2, 2) (3, 1)

$$D = \{-1, 0, 2, 3\}$$

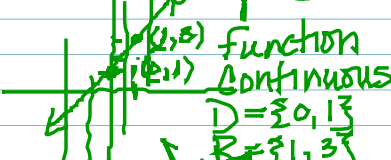
$$R = \{4, 2, 1\}$$



function  
 Discrete



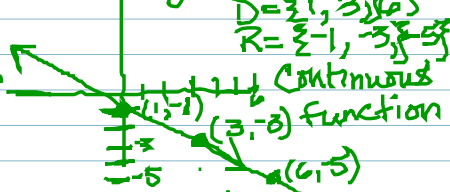
Ex #3  $y = \frac{1}{2}x + 1$



$$D = \{0, 1, 3\}$$

$$R = \{1, 3\}$$

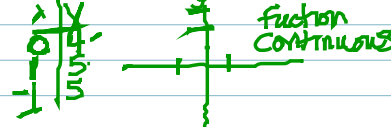
Ex #4:  $y = \frac{2}{3}x - 1$



$$D = \{-1, 3, 5\}$$

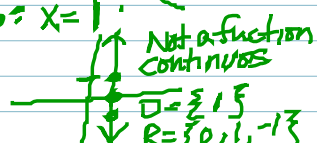
$$R = \{-1, -3, -5\}$$

Ex #5:  $x^2 + 4$



Ex #6:  $x = 1$

x	0
y	1
x	1
y	-1

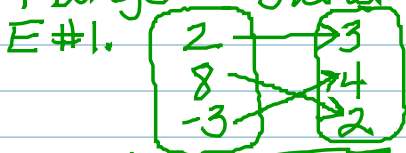


$$D = \{1, 5\}$$

$$R = \{0, 1, -1\}$$

# Unit 2.1 Relations + Functions

Domain - input (x-values) Discrete - points  
 Range - output (y-values) Continuous - line

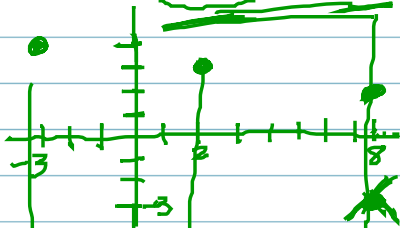


$(2, 3) (8, 2) (-3, 4)$

$x, y$

$D = \{2, 8, -3\}$

$R = \{3, 2, 4\}$



Function - passes vert. line test  
 Not a func. - fails vert. line test

E#2

X	-1	0	2	3
Y	4	2	2	1

$(-1, 4) (0, 2) (2, 2) (3, 1)$

$D = \{-1, 0, 2, 3\}$

$R = \{4, 2, 1\}$

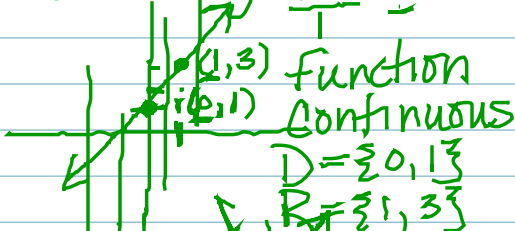
function  
 Discrete



Ex#3

$y = 2x + 1$

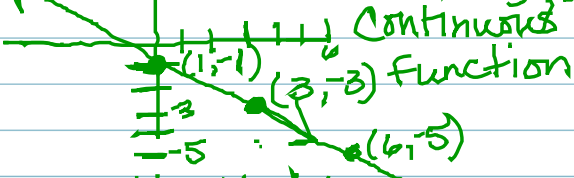
slope  
 y-intercept



Ex#4:  $y = -\frac{2}{3}x - 1$

$D = \{1, 3, 6\}$

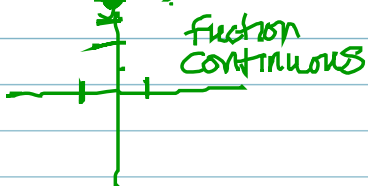
$R = \{-1, -3, -5\}$



Ex#5:

$x^2 + 4$

X	0	4
Y	4	20



Ex#6:  $x = 1$

X	Y
1	0
1	1
1	-1

