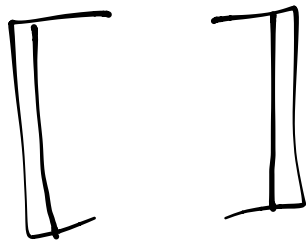
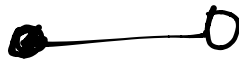


$$f(x) = \lceil x + 3 \rceil$$

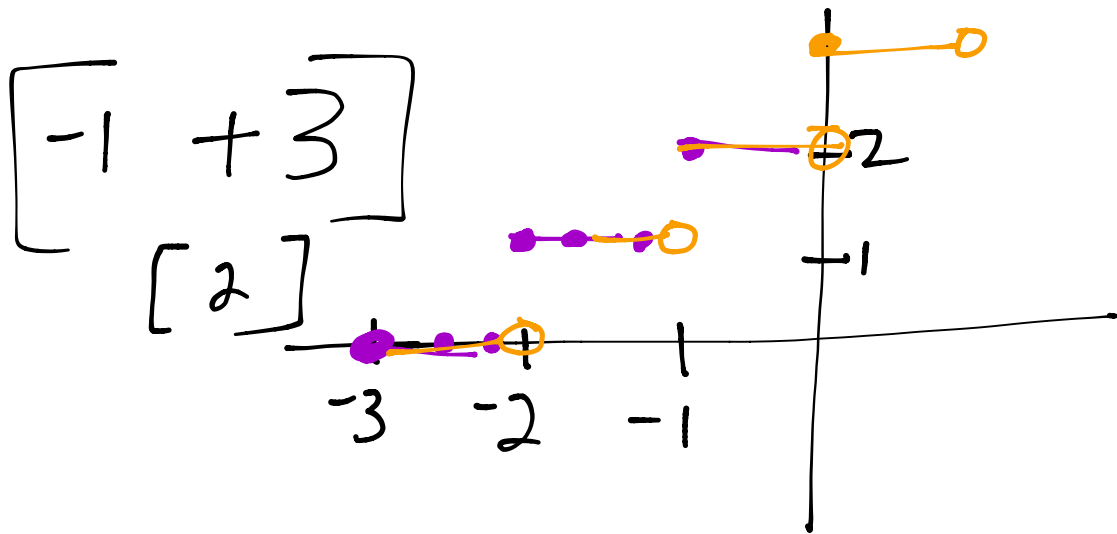


→ Greatest Integer Function



$$f(x) = \lceil x + 3 \rceil$$

$x$	-3	-2.5	-2.1	-2	-1.7	-1.3	-1
$f(x)$	0	0	0	1	1	1	2



ZOOM IN on one

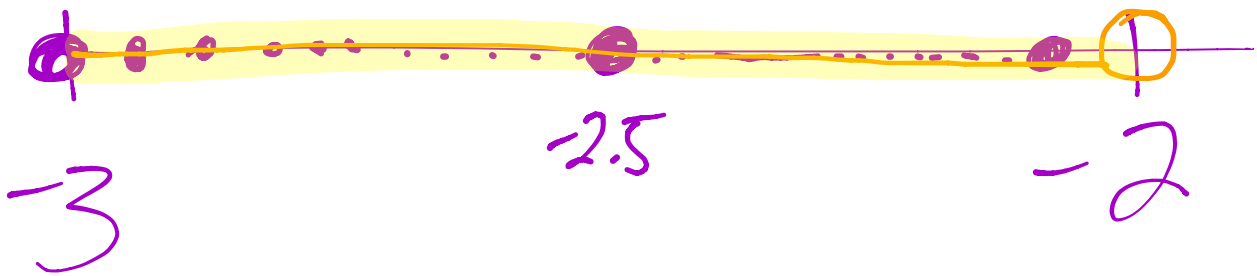
Step

Domain:  $\mathbb{R}$

Range: Integers  $\mathbb{Z}$

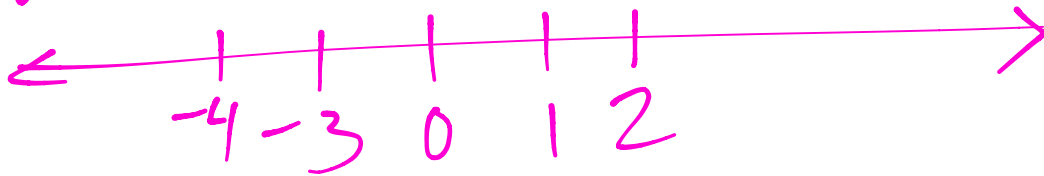
$[x+3]$

$[-2.0001 + 3]$



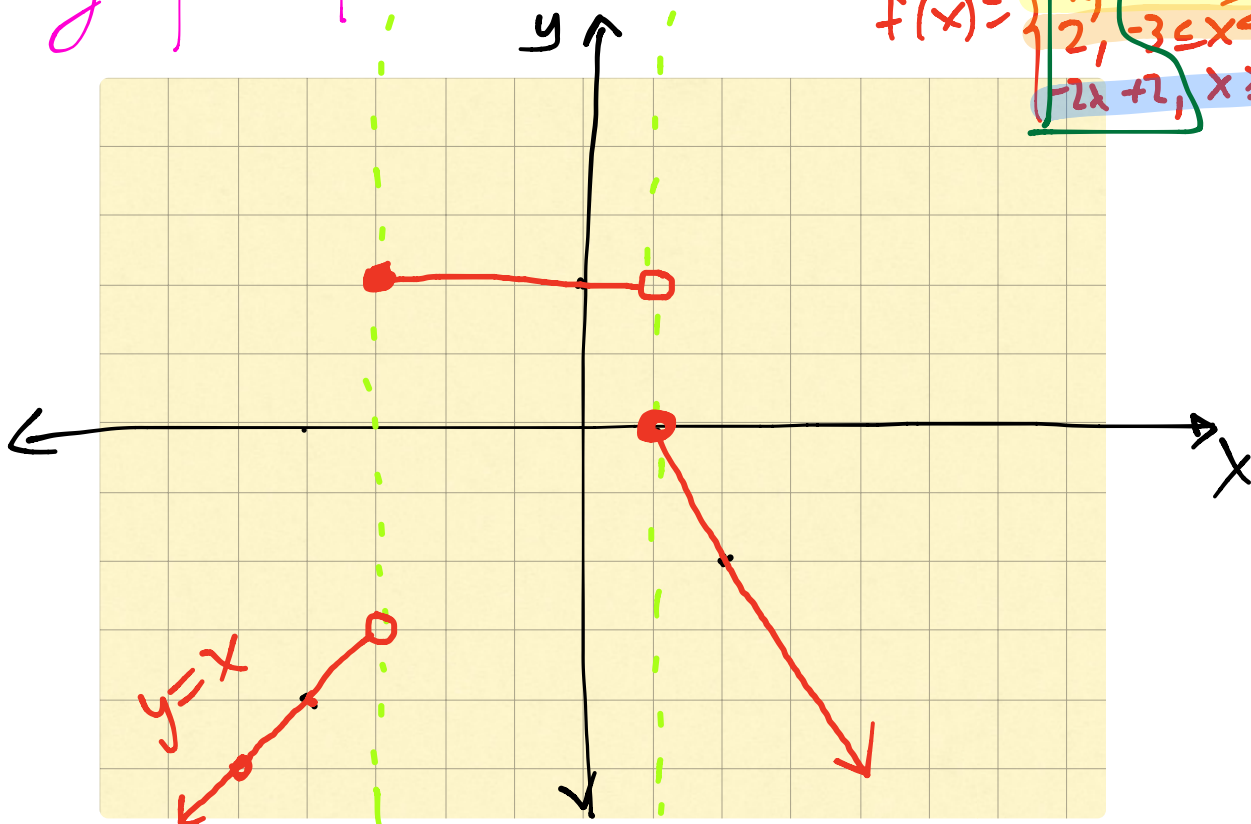
$$\textcircled{40} f(x) = \begin{cases} x & \text{if } x < -3 \\ 2 & \text{if } -3 \leq x < 1 \\ -2x+2 & \text{if } x \geq 1 \end{cases}$$

Number line  $-2 \cdot 2 + 2$



$x$	-4	-3	0	1	2
$y$	-4	2	2	0	-2

$$f(x) = \begin{cases} x, & x < -3 \\ 2, & -3 \leq x < 1 \\ -2x+2, & x \geq 1 \end{cases}$$



Domain:  $\mathbb{R}$

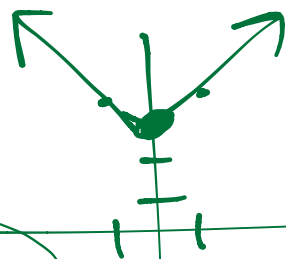
Range (y):  $(-\infty, 0]$  and  $\{2\}$

③②  $g(x) = |x| + 3$

Wolfram Alpha

Desmos

$x$	-3	-2	-1	0	1	2
$g(x)$	6	5	4	3	4	5



Domain:  $\mathbb{R}$

Range:  $[3, \infty)$

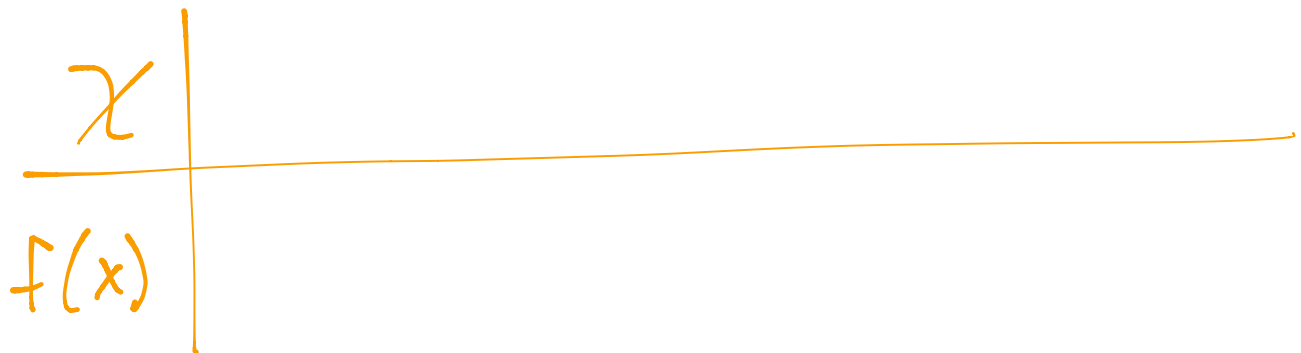
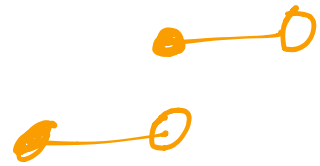
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HW: 29, 33, 41

Scatterplot

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$$f(x) = [x+3]$$



$$|x-2|$$

