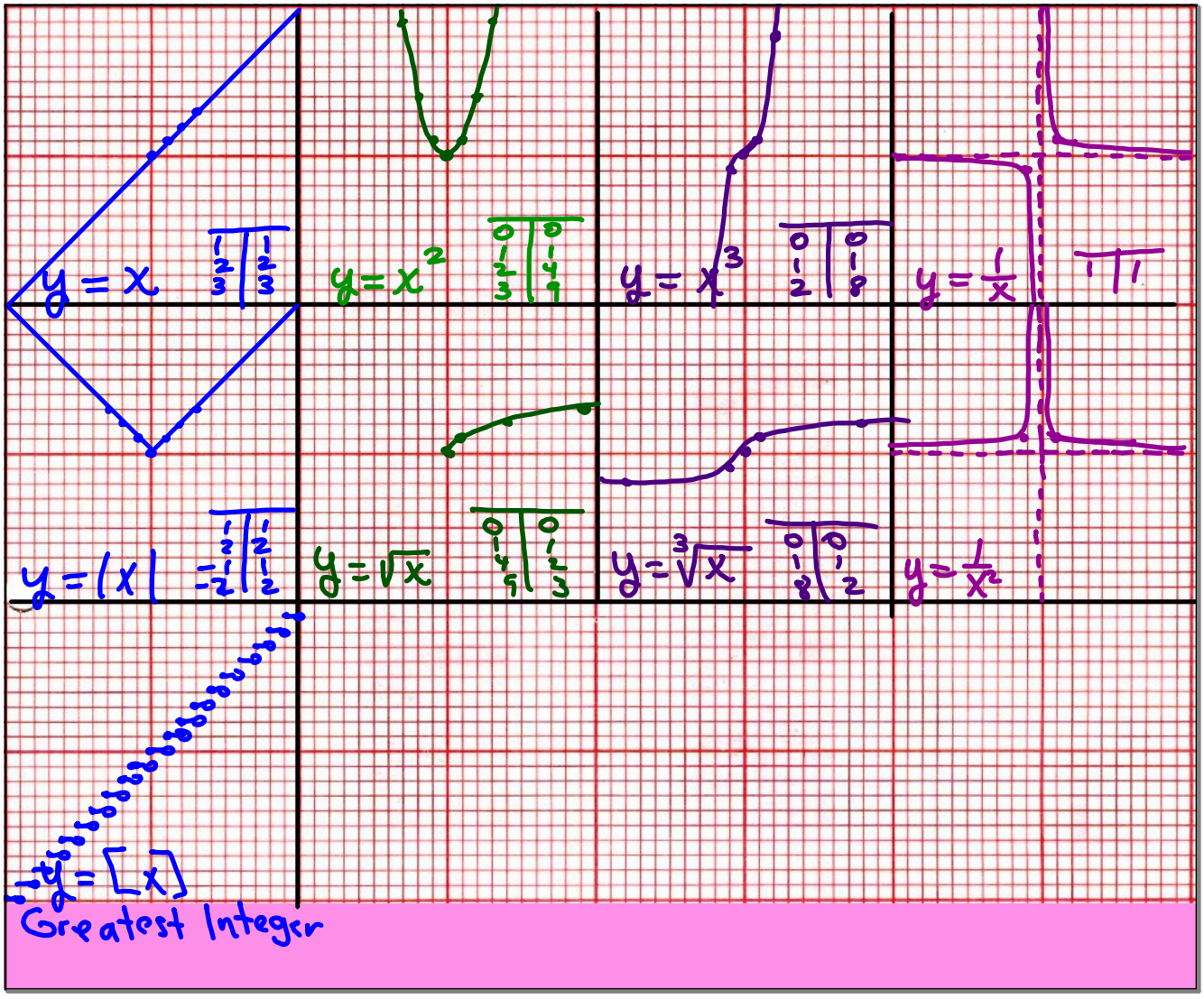
September 1, 2022



up	$f(x)+c$
down	$f(x)-c$
left	$f(x+c)$
right	$f(x-c)$
reflect over x-axis	$-f(x)$
reflect over y-axis	$f(-x)$
stretches/shrinks vertically	$a \cdot f(x)$
stretches/shrinks horizontally	$f(ax)$

$y = x^2 + 2$

$y = (x+3)^2$

$y = -\sqrt[3]{x-4} + 3$

Right 4 Up 3

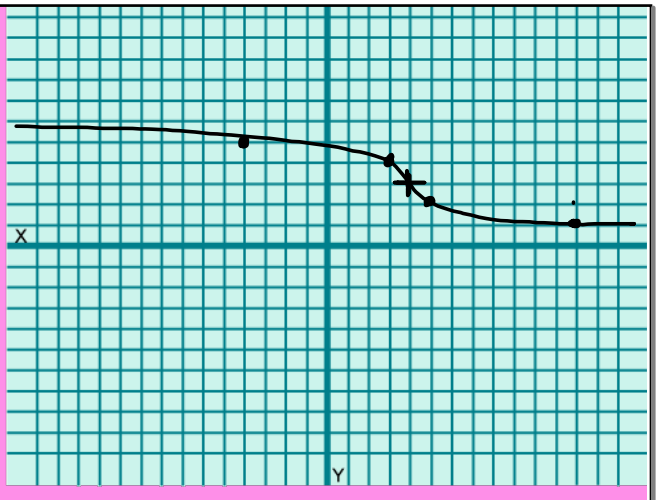
0	0
1	-1
8	-2
27	-3

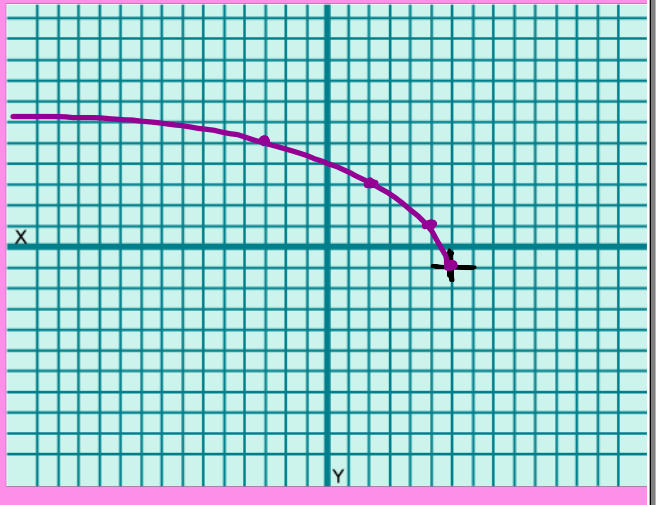
$y = 2\sqrt{6-x} - 1$

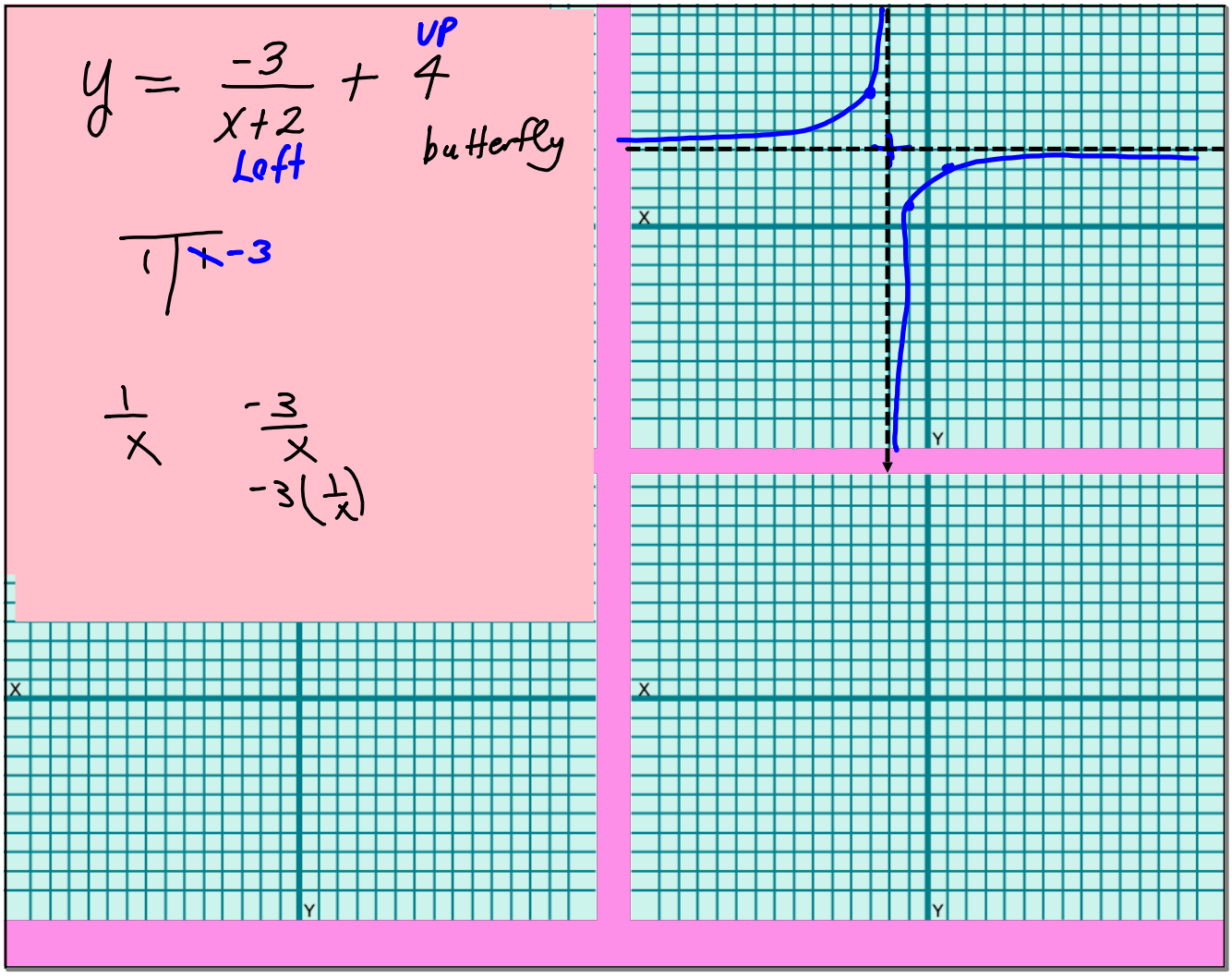
$= 2\sqrt{-(x-6)} - 1$

Right 6 Down 1

0	0
-1	1
-4	4
-9	9



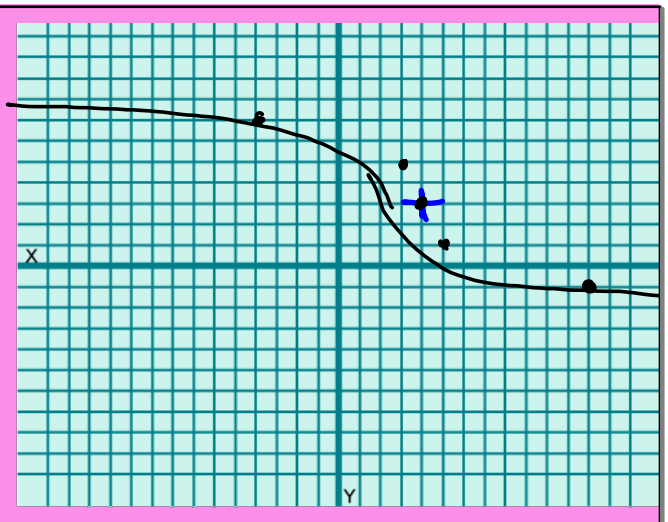



$y = \frac{-3}{x+2} + 4$
UP
Left
butterfly
1 | x -3
$\frac{1}{x}$
$\frac{-3}{x}$
$-3\left(\frac{1}{x}\right)$
X
Y
X
Y
X
Y

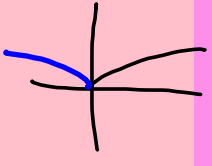
$y = -2\sqrt[3]{x-4} + 3$

Right 4 Up 3

x	y
0	0
1	-2
8	-4



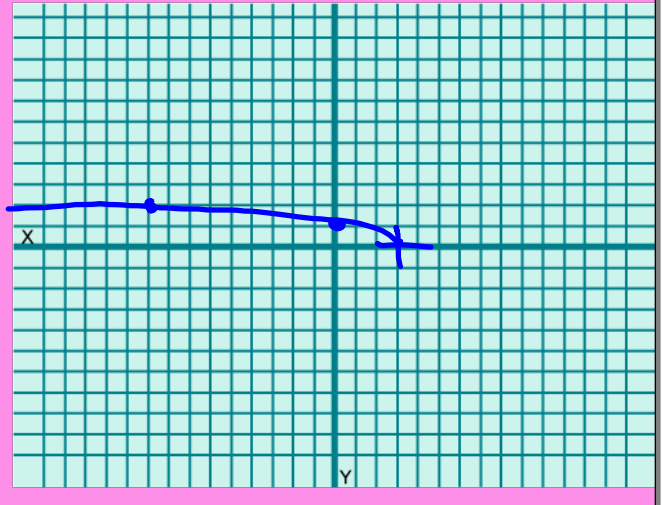
$y = \sqrt{9-3x}$

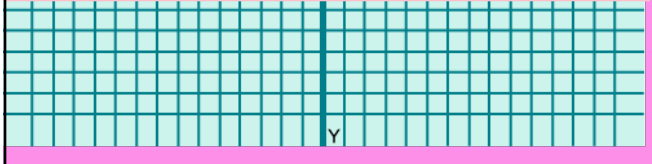


$y = \sqrt[3]{-3(x-3)}$

Right 3

x	y
0	3
1	2
2	1
3	0





49 $f(x) = x^3 - 3x^2$

Left 4, Down 2

$f(x) = (x+4)^3 - 3(x+4)^2 - 2$