

Graph the system of inequalities

$$x + y \leq 7$$

$$5x - 2y \leq 10$$

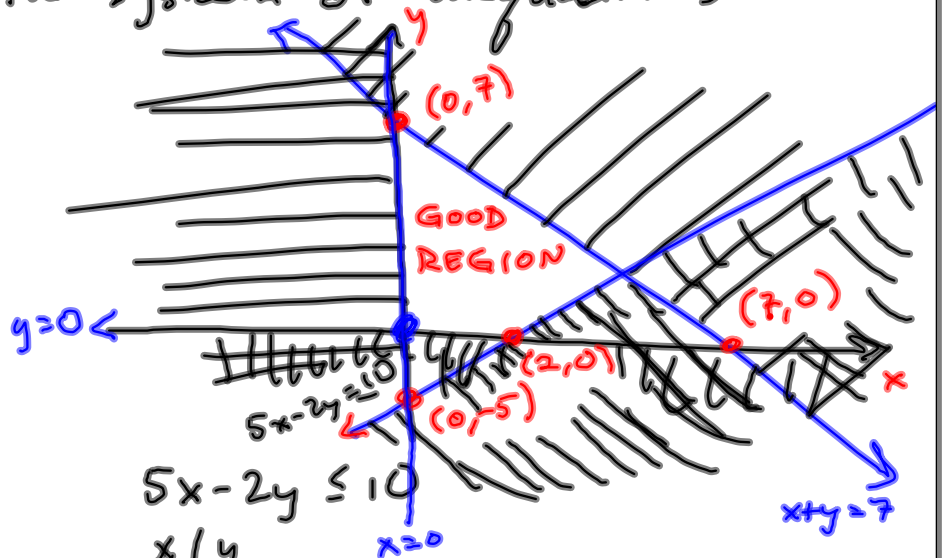
Right of y-axis $\rightarrow x \geq 0$
 Above x-axis $\rightarrow y \geq 0$

$$x + y \leq 7$$

x	y
0	7
7	0

$y = 7$
 $x = 7$

(0,0) Test:
 $0 + 0 \leq 7$? Yes
 (0,0) good



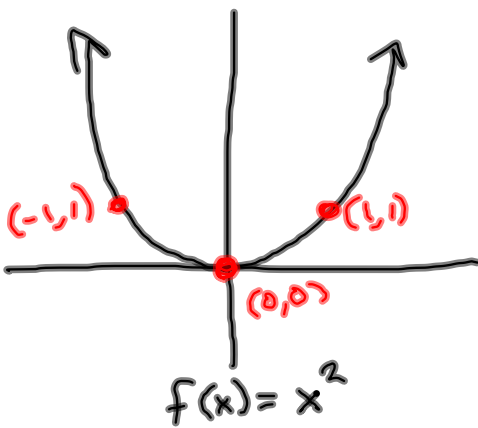
$$5x - 2y \leq 10$$

x	y
0	-5
2	0

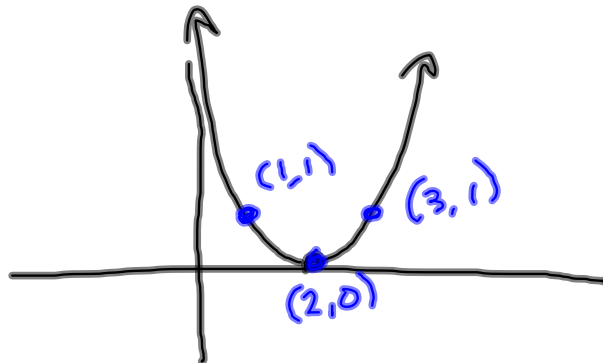
$-2y = 10 \rightarrow -\frac{10}{2} = -5 = y$
 $5x = 10 \rightarrow x = \frac{10}{5} = 2$

(0,0):
 $5(0) - 2(0) \leq 10$?
 $0 \leq 10$? Yes (0,0) good

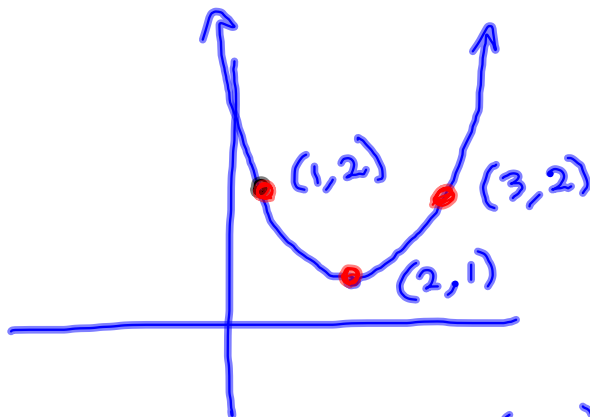
Graph $g(x) = (x-2)^2 + 1$ by transforming $f(x) = x^2$



$f(x-2) + 1$
 Right 2
 up 1

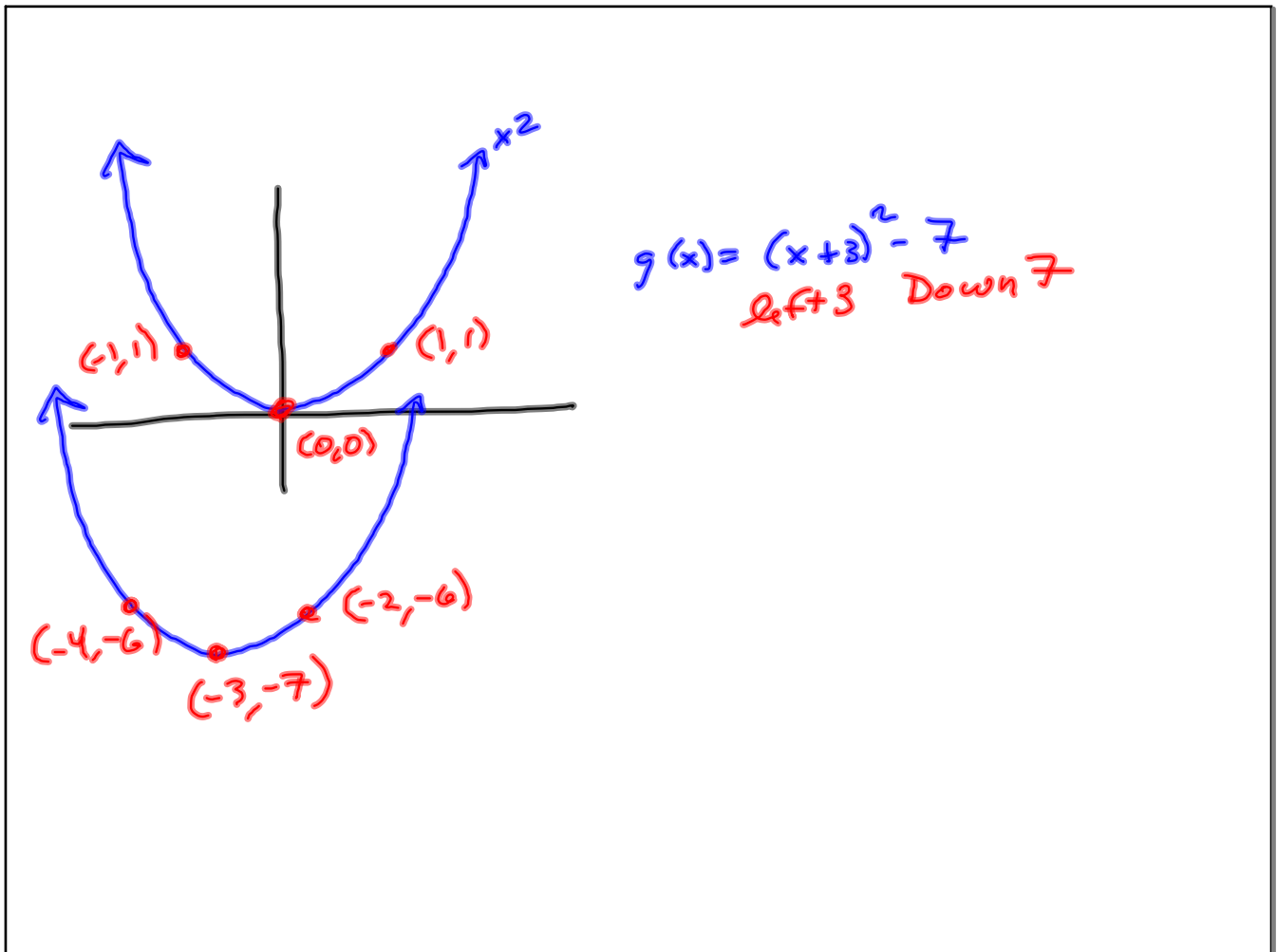


Right 2
 Add 2 to x-values



up 1
 Add 1 to
 y-values

Inside	$f(x-3)$	Delay RIGHT 3
	$f(x+3)$	Left 3
outside	$f(x) - 3$	Down 3
	$f(x) + 3$	Up 3



$$(a+b)(a-b) = a^2 - b^2$$

$$(a+bi)(a-bi) = a^2 - (bi)^2 = a^2 - b^2i^2 = a^2 + b^2$$

$$(a+b)^2 = a^2 + 2ab + b^2$$

$$(a-b)^2 = a^2 - 2ab + b^2$$

$$\begin{aligned}(\sqrt{6} + 2i)(\sqrt{6} - 2i) &= (\sqrt{6})^2 - (2i)^2 = 6 - 4i^2 \\ &= 6 + 4 = 10\end{aligned}$$

Old tests. Emphasis on things
in Reviews.