Section 2.4: cont'd

Wednesday, January 21, 2015
1:02 PM

Summary of translations: (translation means "shift")

rule: Consider the graph $y = f(x)$

the graph $\boxed{y = f(x) + b}$ is just the graph of $y = f(x)$ shifted up by "b" units

similarly, the graph $\boxed{y = f(x) - b}$ is just $y = f(x)$ shifted down by b

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the graph $\boxed{y = f(x-d)}$ is just the graph of $y = f(x)$ shifted right by d

the graph $\boxed{y = f(x+d)}$ is just the graph of $y = f(x)$ shifted left by d.

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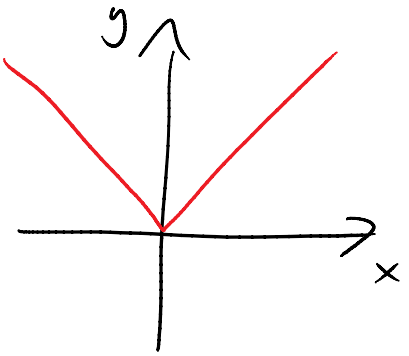
the graph $\boxed{y = -f(x)}$ is just $y = f(x)$ flipped over x-axis

the graph $y = f(-x)$ is just $y = f(x)$ flipped over y-axis

combining ideas:

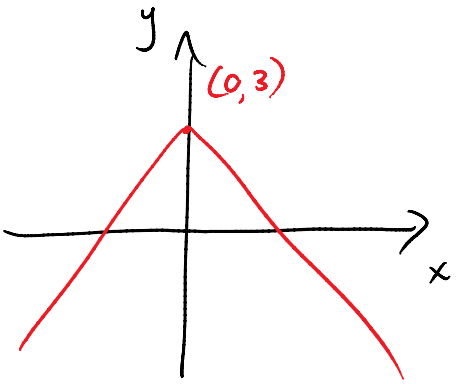
sketch $f(x) = |-x|$



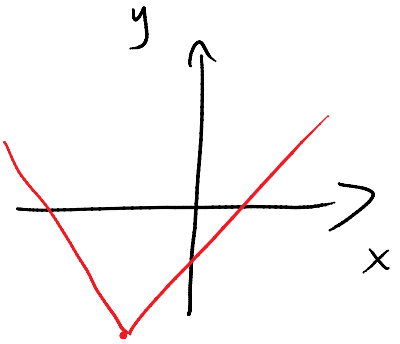
$\uparrow$

same as $f(x) = |x|$ because of symmetry

sketch $f(x) = -|x| + 3$



sketch $f(x) = |x+1| - 2$



$(-1, -2)$

note: we won't be doing:

$$f(-x+2)$$

↑ ↑

tricky