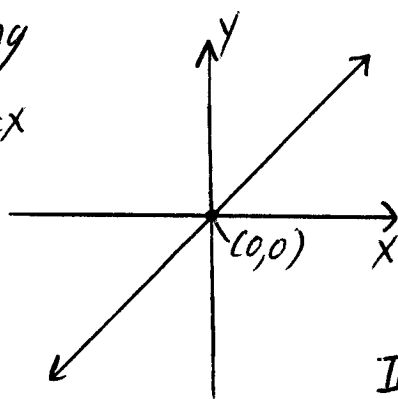
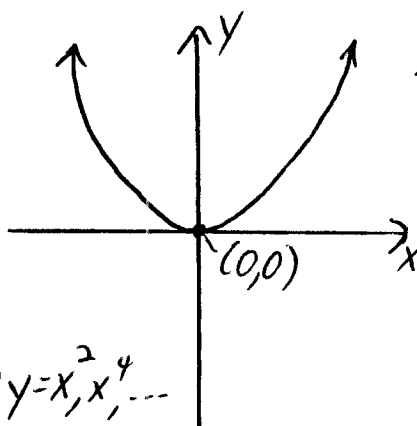


Base Graphs You Should Know & Love

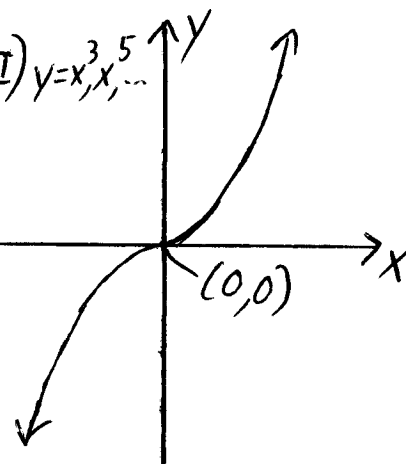
I) $y=x$



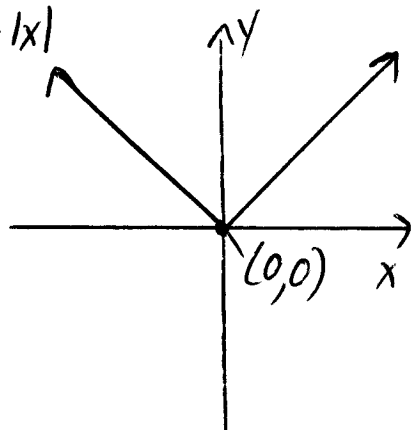
II) $y=x^2, x^4, \dots$



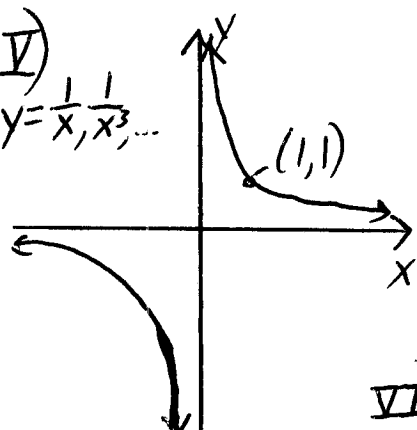
III) $y=x^3, x^5, \dots$



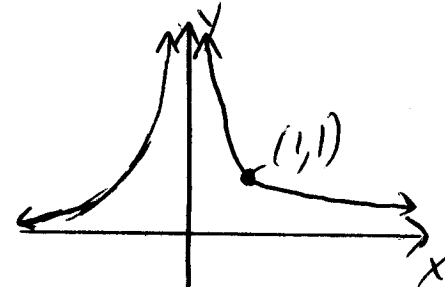
IV) $y=|x|$



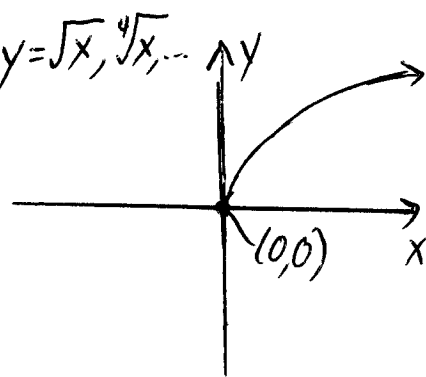
V) $y=\frac{1}{x}, \frac{1}{x^3}, \dots$



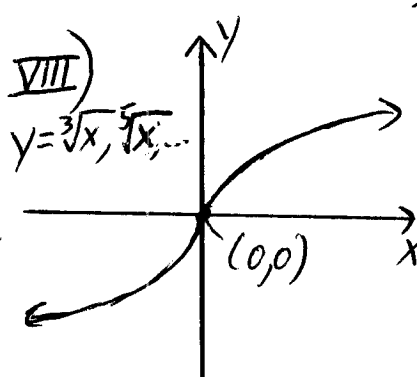
VI) $y=\frac{1}{x^2}, \frac{1}{x^4}, \dots$



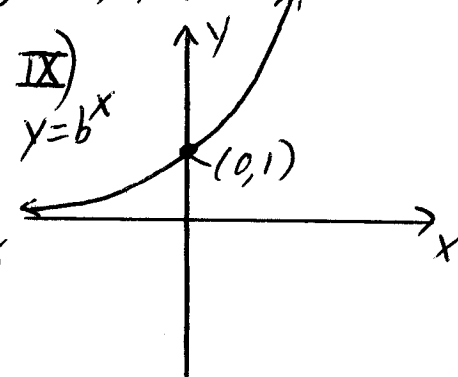
VII) $y=\sqrt{x}, \sqrt[4]{x}, \dots$



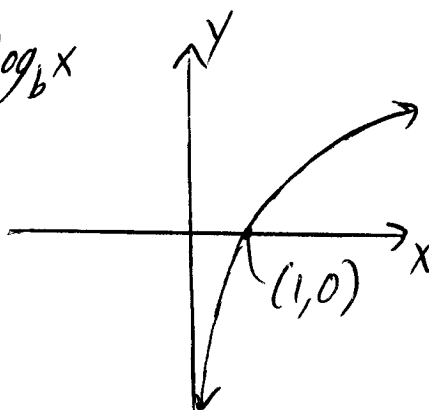
VIII) $y=\sqrt[3]{x}, \sqrt[5]{x}, \dots$



IX) $y=b^x$



X) $y=\log_b x$



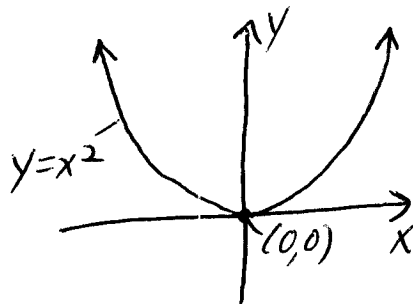
Corresponding Domain & Range (D&R)

- | | |
|------------------------------------|------------------------------|
| I) D: All #'s, R: All #'s | VIII) D: All #'s, R: All #'s |
| II) D: All #'s, R: $y \geq 0$ | IX) D: All #'s, R: $y > 0$ |
| III) D: All #'s, R: All #'s | X) D: $x > 0$, R: All #'s |
| IV) D: All #'s, R: $y \geq 0$ | |
| V) D: $x \neq 0$, R: $y \neq 0$ | |
| VI) D: $x \neq 0$, R: $y > 0$ | |
| VII) D: $x \geq 0$, R: $y \geq 0$ | |

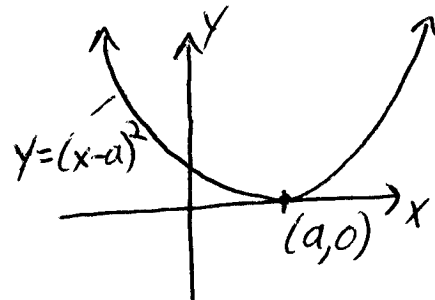
Translations & Reflections

Assume $y=f(x)$ is a function & 'a' is a positive constant

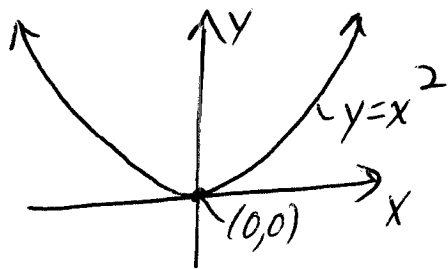
1) $f(x-a)$ is $f(x)$ shifted to right 'a' units.



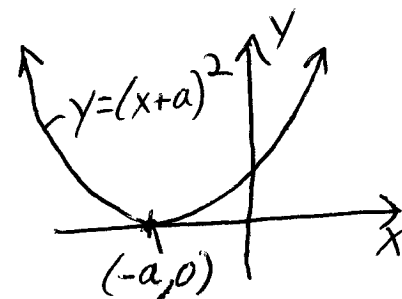
$\Rightarrow$



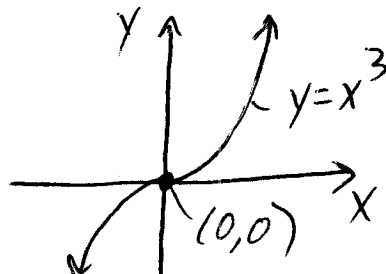
2) $f(x+a)$ is $f(x)$ shifted to left 'a' units



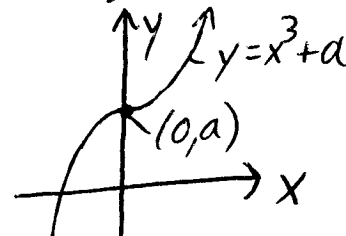
$\Rightarrow$



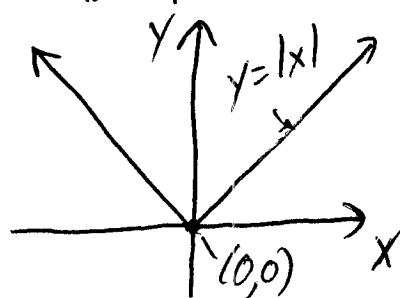
3) $f(x)+a$ is $f(x)$ shifted up 'a' units



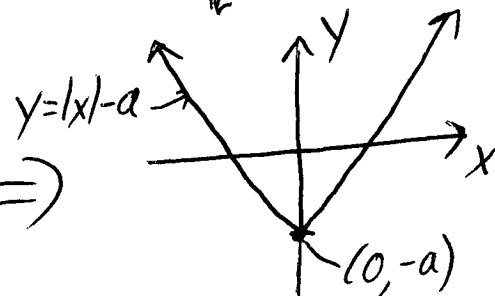
$\Rightarrow$



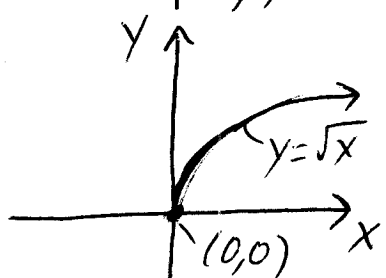
4) $f(x)-a$ is $f(x)$ shifted down 'a' units



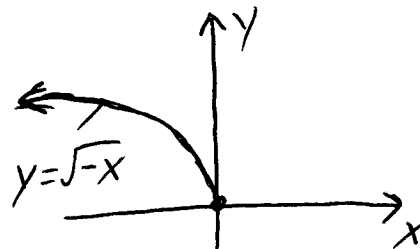
$\Rightarrow$



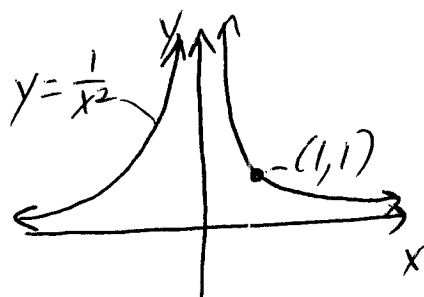
5) $f(-x)$ is $f(x)$ reflected about y-axis



$\Rightarrow$



6) $-f(x)$ is $f(x)$ reflected about x-axis



$\Rightarrow$

