Graphs of Functions

main topics: types of graphs
domains & ranges

	basic equation	name	basic shape	Example
①	$y=ax^2+bx+c$ or $y=a(x-h)^2+k$ ($y=x^2$)	vertical parabola	∪	$y=3(x+2)^2+1$
②	$x=ay^2+by+c$ or $x=a(y-k)^2+h$ ($x=y^2$)	horizontal parabola	⊃	$x=y^2+3$
③	$ax+by=c$	line	↗	$2x-3y=6$
④	$y=\lvert x\rvert$	absolute value equation	∨	$y=2\lvert x+3\rvert$
⑤	$y=\sqrt{x}$	square root equation (½ parabola)	⌒	$y=\sqrt{x-6}$
⑥	$y=x^3$	cubic equation	↗	$y=(x+3)^3$
⑦	$y=x^4$		∪	$y=(x+2)^4$