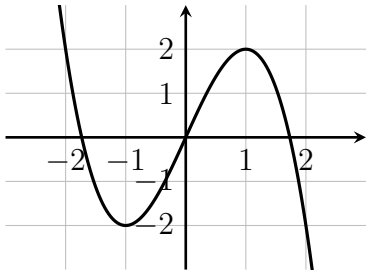
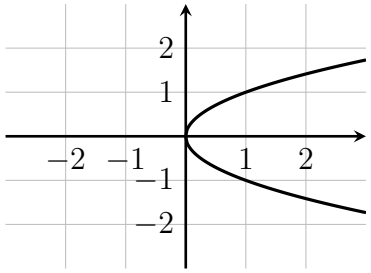
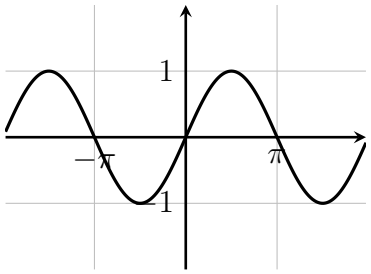
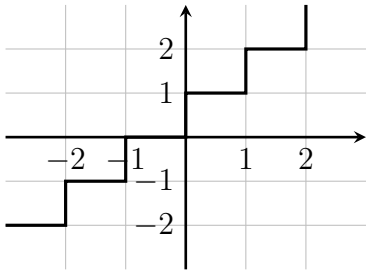
$x^2 + y^2 = 9$	
$y = x^2 + 1$	
$y = x^3 + 1$	
$y = e^x + e^{-x}$	
$y = \begin{cases} x & x \geq 0 \\ -x & x < 0 \end{cases}$	

$$y = \begin{cases} x^2 + 1 & x \geq -1 \\ x + 2 & x < -1 \end{cases}$$









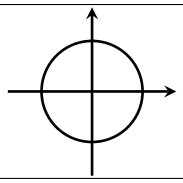
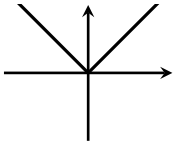
x	-2	-1	0	1	2
y	3	2	1	2	3

x	2	1	0	1	2
y	3	2	1	0	-1

x	-2	-1	0	1	2
y	3	2	0	-2	-3

x is a variable that represents a person and y is a variable that represents that person's height.

A pebble is stuck in your bike tire as you ride forward at a constant speed. x is the amount of time you've been riding and y is the height of the pebble.

circle centered at the origin, radius=3		even function	y is a function of x
$f(1) = 2$	odd function	y is a function of x	increasing function
$f(1) = 2$	the range of this function is $[-1, 1]$	this is a one-to-one function (has an inverse)	even function
y is a function of x	y is a function of x	even function	$y = \|x\|$
	y is a function of x	$f(1) = 2$	the range of this function is $\mathbb{R}$ (all real numbers)
	$f(1)$=2	y is a function of x	the range of this function is $\mathbb{R}$ (all real numbers)
$x = y^2$	odd function	$y = \sin x$	y is a function of x
the range of this function is $\mathbb{R}$ (all real numbers)	y is a periodic function	even function	y is a function of x
$f(1) = 2$	the domain of this function is $\{-2, -1, 0, 1, 2\}$	odd function	y is a function of x
decreasing function	this is a one-to-one function (has an inverse)	the domain of this function is $\{-2, -1, 0, 1, 2\}$	y is a function of x
the domain of this function does not contain any negative numbers	y is a function of x	the domain of this function does not contain any negative numbers	y is a periodic function