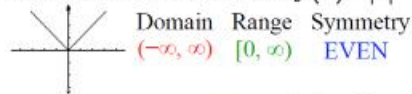
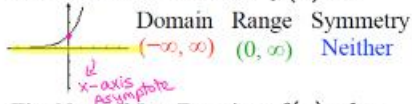


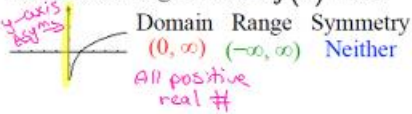
The Absolute Value Function: $f(x) = |x|$



The Exponential Function: $f(x) = e^x$ has y-int (No x-int)



The Natural Log Function: $f(x) = \ln x$ has x-int (No y-int)

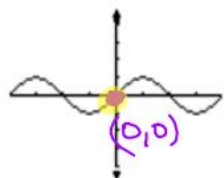


Asymptote: is a line that the graph approaches to but does not touch.

	D	R	Sym	Graph	X-int	Y-int
Exp	$(-\infty, \infty)$	$(0, \infty)$	N	x-axis Asymptote	None	one y-int (0,1)
log	$(0, \infty)$	$(-\infty, \infty)$	N	y-axis Asymptote	one x-int (1,0)	None

log and exp. are inverses.

The Sine Function: $f(x) = \sin x$



Domain Range Symmetry

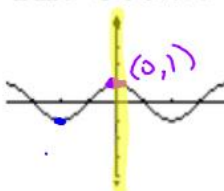
$(-\infty, \infty)$ $[-1, 1]$

ODD

$$\begin{cases} \sin 60^\circ = 0.866 \\ \sin -60^\circ = -0.866 \end{cases}$$

Starts at 0 ($\sin 0 = 0$)

The Cosine Function: $f(x) = \cos x$



Domain Range Symmetry

$(-\infty, \infty)$ $[-1, 1]$

EVEN

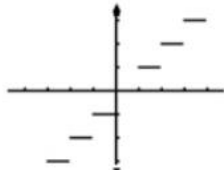
$$\begin{cases} \cos 180^\circ \\ \cos 90^\circ \end{cases}$$

Starts at max

$$\begin{cases} \cos 60^\circ = 0.5 \\ \cos(-60^\circ) = 0.5 \end{cases}$$

Same output for opposite input.

The Greatest Integer Function: $f(x) = \text{int } x$



Domain Range Symmetry

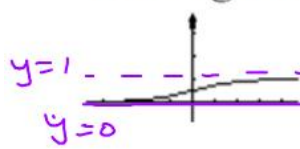
$(-\infty, \infty)$ Range

Neither

$\{\dots, -2, -1, 0, 1, 2, \dots\}$

Set of integer values $\{I\}$

The Logistic Function: $f(x) = \frac{1}{1+e^{-x}}$



Domain Range Symmetry

$(-\infty, \infty)$ $(0, 1)$

Neither

Functions that have restrictions on

- log (input has to be $\oplus$) > 0
0 not allowed.
- Radical (input has to be $\oplus$) ≥ 0
 $\sqrt{0} = 0$ 0 allowed
- Reciprocal $\frac{1}{x}$ (0 is not allowed in the denominator)