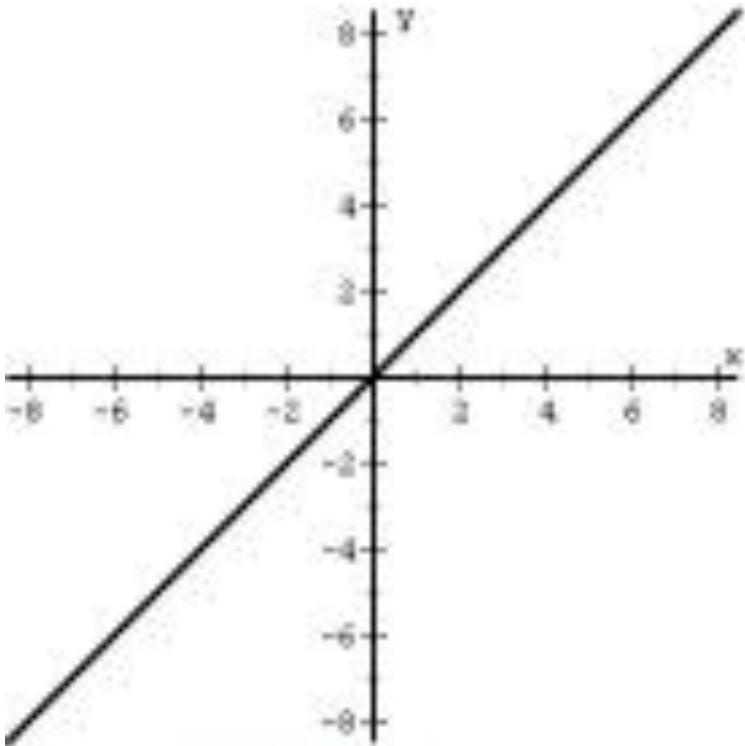


*The  
Function  
Zoo*

***Name:***

***Period:***

# *Linear Lemmings*



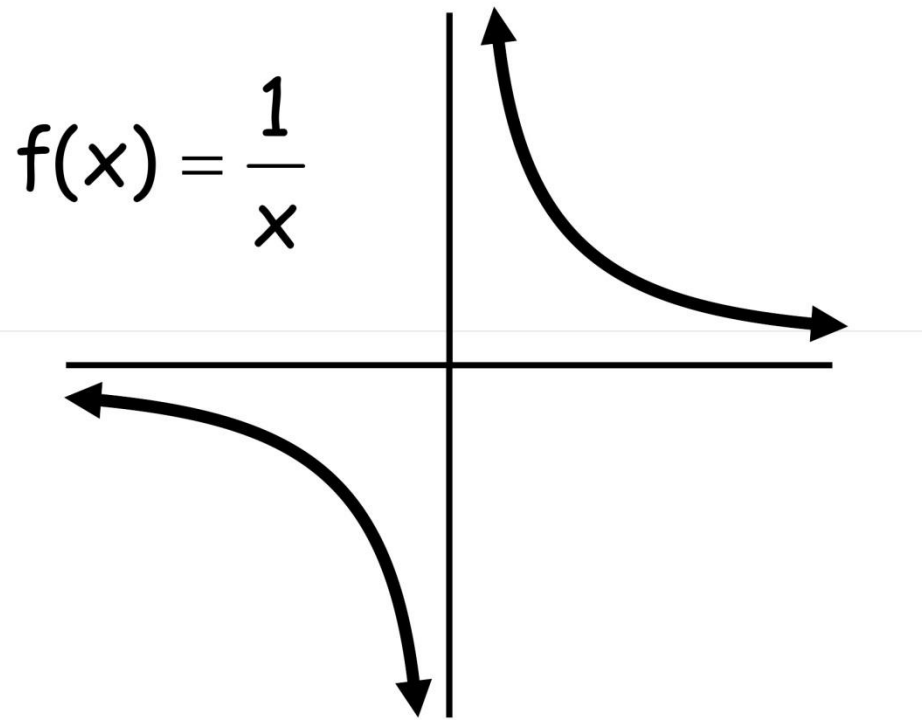
$$f(x) = x$$

Domain:  $(-\infty, \infty)$

Range:  $(-\infty, \infty)$

$x$	$f(x) = x$
-2	-2
-1	-1
0	0
1	1
2	2

# *Inverse Iguana*



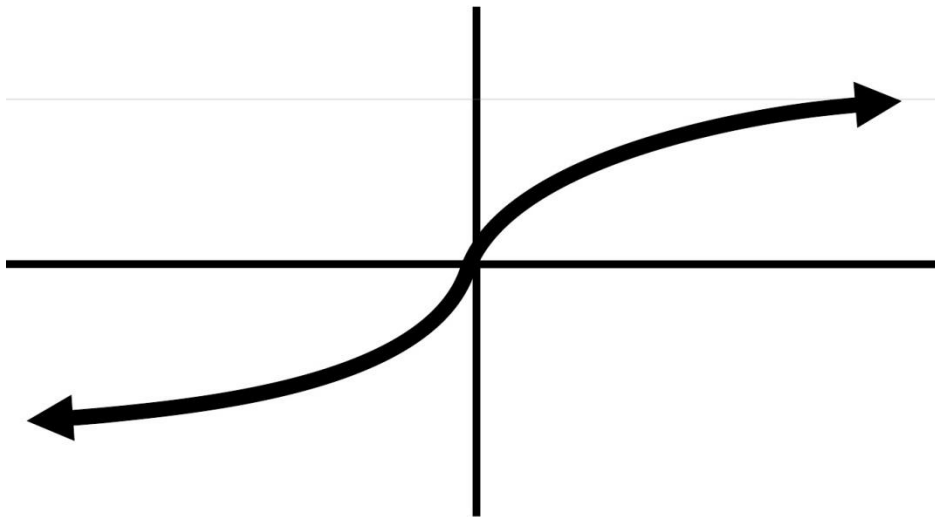
Domain:  $(-\infty, 0) \cup (0, \infty)$

Range:  $(-\infty, 0) \cup (0, \infty)$

$x$	$f(x) = 1/x$
-2	$-1/2$
-1	-1
0	$\infty$
1	1
2	$1/2$

# *Cube root Cuttlefish*

$$f(x) = \sqrt[3]{x}$$

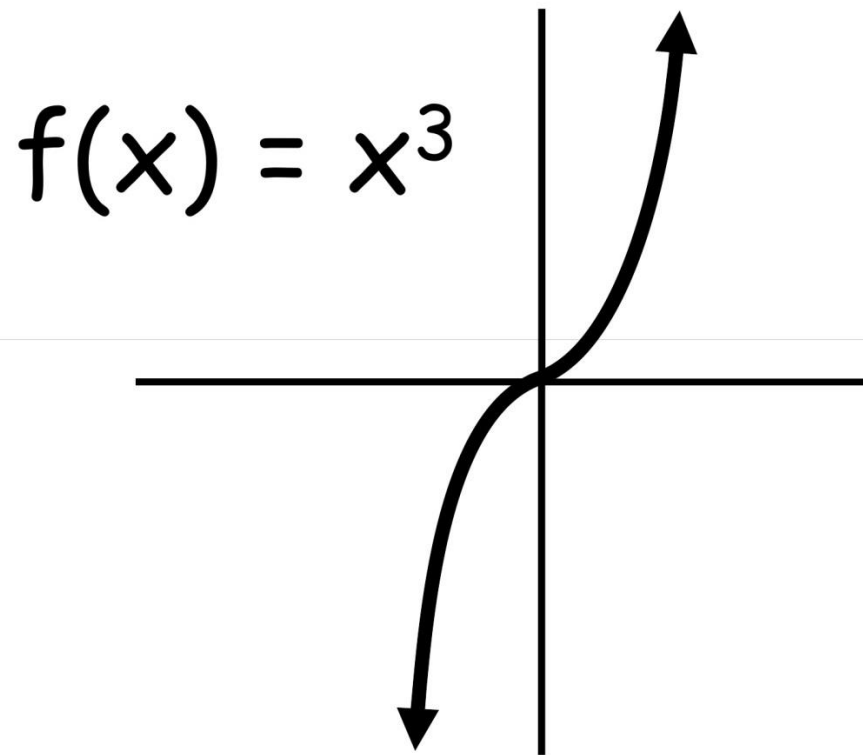


Domain:  $(-\infty, \infty)$

Range:  $(-\infty, \infty)$

$x$	$f(x) = \sqrt[3]{x}$
-64	-4
-8	-2
0	0
8	2
64	4

# ***Cubic Cougars***



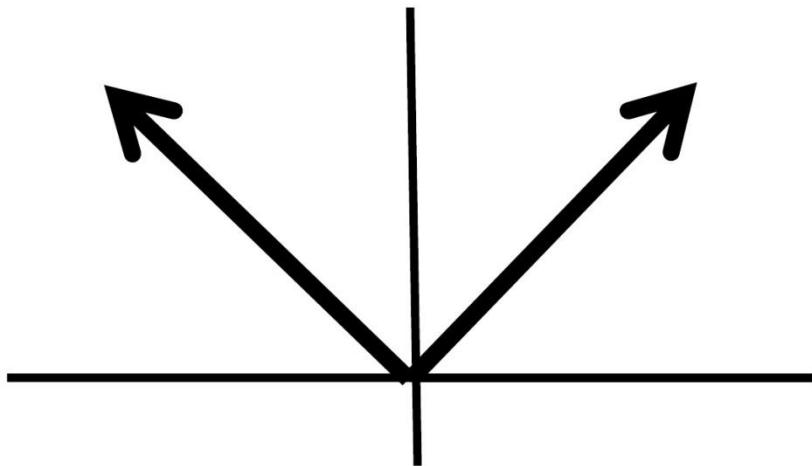
Domain:  $(-\infty, \infty)$

Range:  $(-\infty, \infty)$

$x$	$f(x) = x^3$
-2	-8
-1	-1
0	0
1	1
2	8

# ***Absolute Value Alligators***

$$f(x) = |x|$$



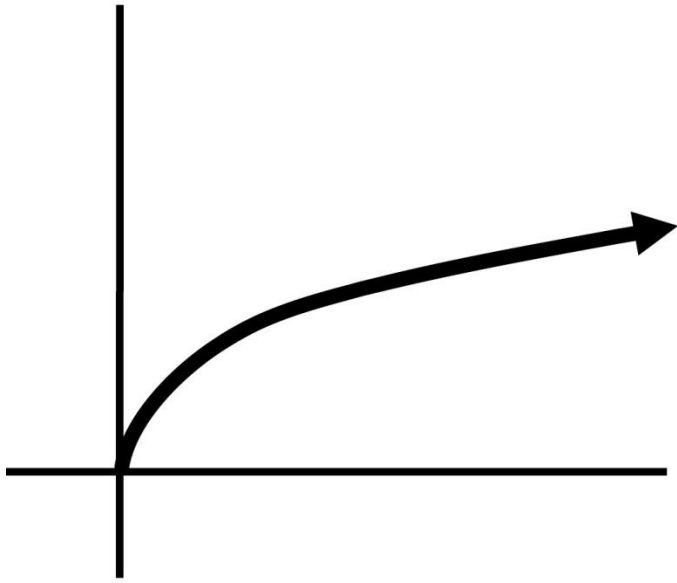
Domain:  $(-\infty, \infty)$

Range:  $[0, \infty)$

$x$	$f(x) =  x $
-2	+2
-1	+1
0	0
1	+1
2	+2

# *Square Root Squirrels*

$$f(x) = \sqrt{x}$$



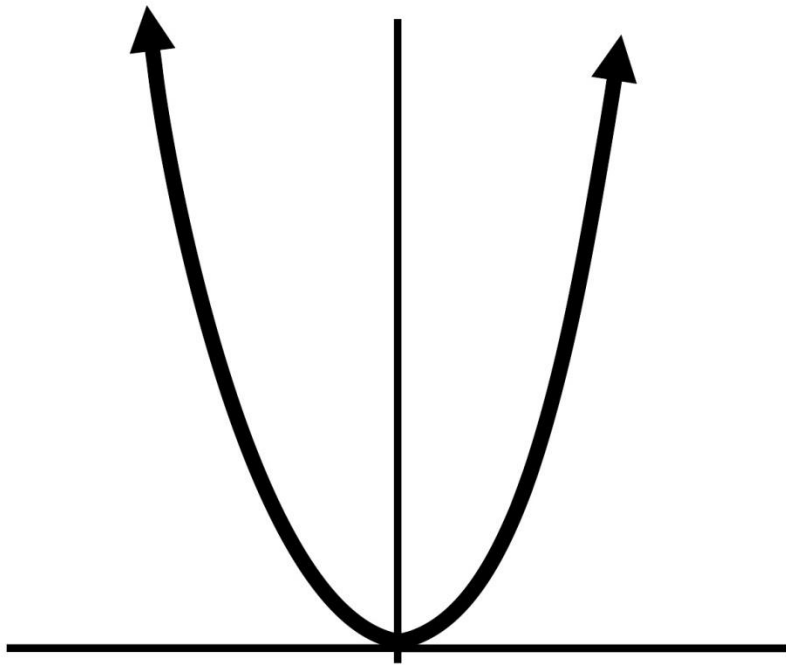
Domain :  $[0, \infty)$

Range :  $[0, \infty)$

x	$f(x) = \sqrt{x}$
-25	Undefined
-9	Undefined
0	0
9	3
25	5

# ***Parabola Penguins***

Parabola:  $f(x) = x^2$



Domain:  $(-\infty, \infty)$

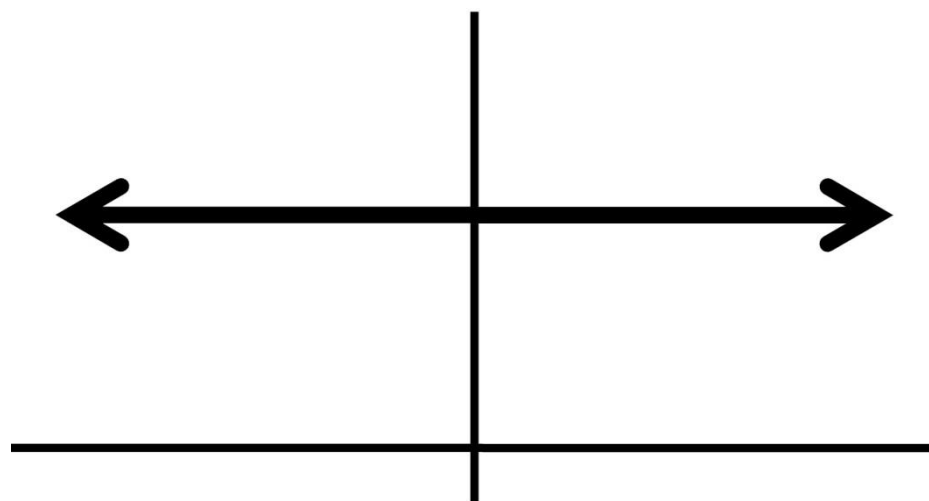
Range:  $[0, \infty)$

$x$	$f(x) = x^2$
-2	+4
-1	+1
0	0
1	+1
2	+4



# ***Horizontal Herrings***

$$f(x) = \text{a number}$$



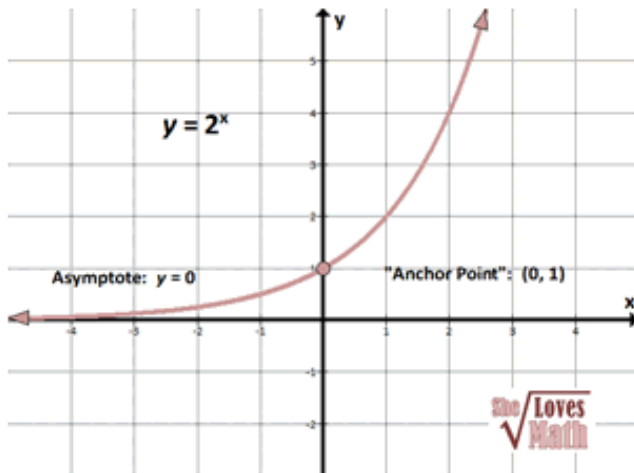
Domain:  $(-\infty, \infty)$

Range: the number

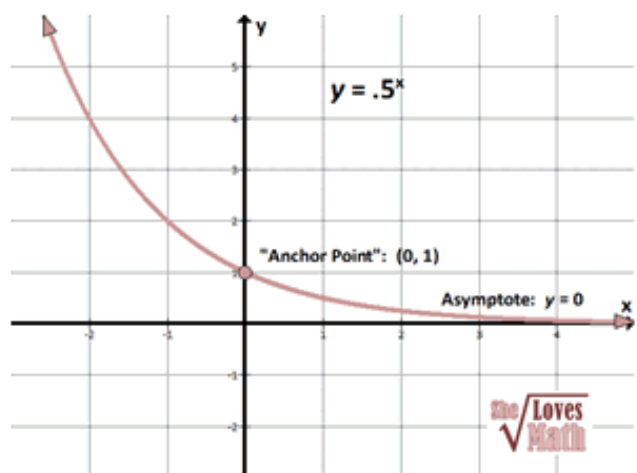
$x$	$f(x) = 4$
-2	4
-1	4
0	4
1	4
2	4

# Exponential Eagles

"Parent" Exponential Graphs



Domain:  $(-\infty, \infty)$   
Range:  $(0, \infty)$



Domain:  $(-\infty, \infty)$   
Range:  $(0, \infty)$

x	$f(x) = 3^x$
-2	1/9
-1	1/3
0	1
1	3
2	9