

# INVERSE FUNCTIONS

$$f(x) = \frac{1}{x}$$

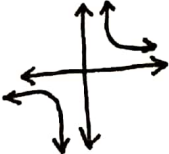
∴ graphing ∴  
(GRAPHING)

$$y = a \frac{1}{x-h} + k$$

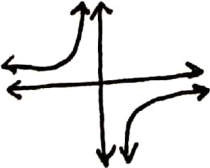
Treat the denominator of the fraction like parenthesis

**a**

If  $a > 0 \dots$



$a < 0 \dots$



If  $a > 1 \dots$  STRETCHED

$0 < a < 1 \dots$  shrunk

DOMAIN  $(-\infty, 0) \cup (0, \infty)$   
(of parent function  $\frac{1}{x}$ )

RANGE  $(-\infty, 0) \cup (0, \infty)$

**h**

$\frac{1}{x-h}$  h units RIGHT

$\frac{1}{x+h}$  h units LEFT

**k**

$\frac{1}{x} + k$  k units UP

$\frac{1}{x} - k$  k units DOWN