

RIGID AND NONRIGID TRANSLATIONS

RIGID TRANSLATIONS:

$f(x - k)$: shifts the graph of $f(x)$ to the right k units

$f(x + k)$: shifts the graph of $f(x)$ to the left k units

$f(x) - k$: shifts the graph of $f(x)$ down k units

$f(x) + k$: shifts the graph of $f(x)$ up k units

$-f(x)$: reflects the graph of $f(x)$ across the x - axis

$f(-x)$: reflects the graph of $f(x)$ across the y - axis

NONRIGID TRANSLATIONS:

$k * f(x)$: two cases

(1) if $0 < k < 1$: vertical shrink

flatter graph, smaller y -values, farther from the y -axis

(2) if $k > 1$: vertical stretch

steeper graph, larger y -values, closer to the y -axis