The function $f(x) = \frac{1}{x}$. Sketch the graph of $y = f(x)$ and carry out the following transformations showing any points of intersection with the coordinate axis and the equations of any asymptotes:

$f(x) + 2$

$f(x - 1)$

$2f(x)$

$f(3x)$

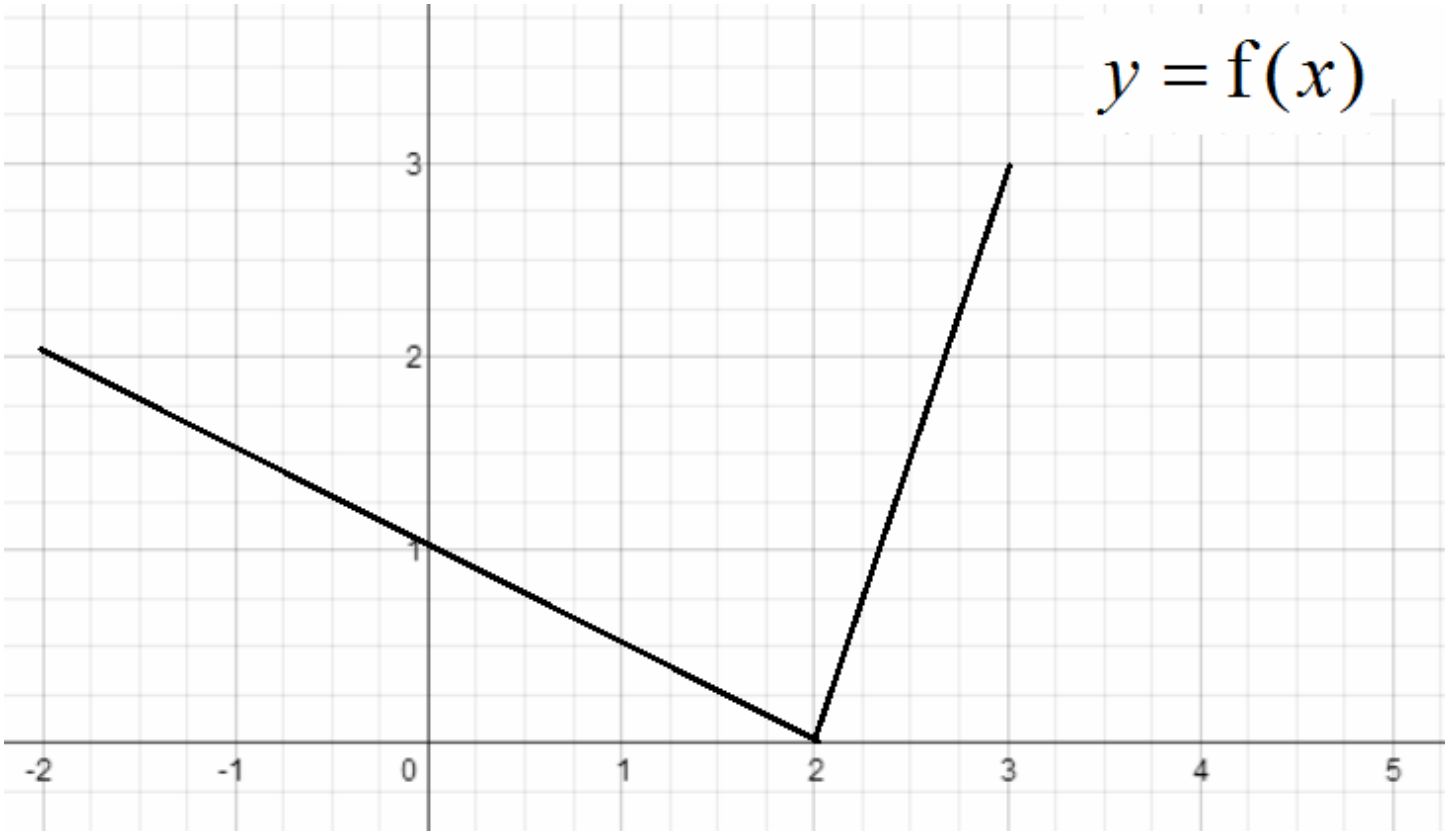
$f(-x)$

$f(x - 3) - 2$

$-f(x)$

$-f(x) + 1$

A different function, $y = f(x)$ is pictured below. The graph meets the x axis at (2,0) and crosses the y at (0,1) Apply the same transformations above stating clearly any points where the graph touches of meets the coordinate axis.



The function $f(x) = \frac{1}{x}$. Sketch the graph of $y = f(x)$ and carry out the following transformations showing any points of intersection with the coordinate axis and the equations of any asymptotes:

$f(x) + p,\ p > 0$
$f(x) + p,\ p < 0$
$f(x - q),\ q > 0$
$f(x - q),\ q < 0$
$f(x - q) + p,\ p > q$

A different function, $y = f(x)$ is pictured below. The graph meets the x axis at (2,0) and crosses the y at (0,1) Apply the same transformations above stating clearly any points where the graph touches of meets the coordinate axis.