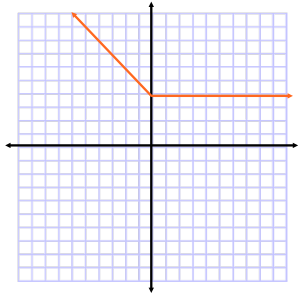


### 1-3 Piecewise functions

A piecewise function is a function with a different equations defined over unique intervals of x.

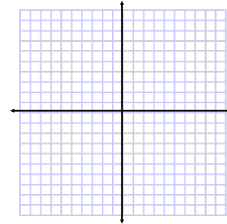
For example:

$$f(x) = \begin{cases} -x+4 & \text{if } x \leq 0 \\ 4 & \text{if } x > 0 \end{cases}$$

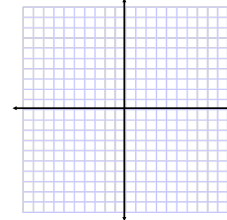


Graph the following:

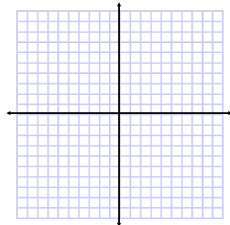
$$f(x) = \begin{cases} x & \text{if } x \geq 0 \\ -x & \text{if } x < 0 \end{cases}$$



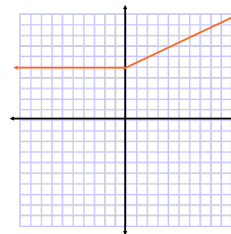
$$f(x) = \begin{cases} x^2 & \text{if } x \leq 0 \\ \sqrt{x} & \text{if } x > 0 \end{cases}$$



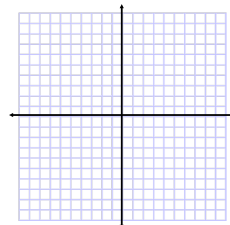
$$f(x) = \begin{cases} 1, & x < -2 \\ 2x+3, & x \geq -1 \end{cases}$$



Write the equation for the following piecewise functions



$$f(x) = \begin{cases} x^2 - 2, & x < 0 \\ \sqrt{x}, & x > 0 \end{cases}$$



Write the equation for the following piecewise functions

