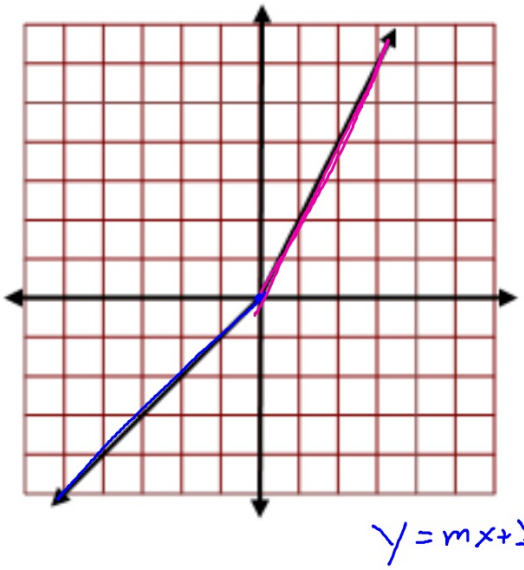
Write the equation of the piecewise function



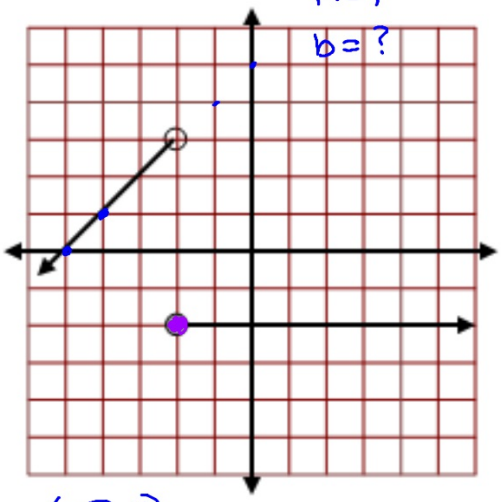
$y = mx + b$

$x < 0$ $\quad$ $x \geq 0$

$y = x$ $\quad$ $y = 2x$

$$f(x) = \begin{cases} x & x < 0 \\ 2x & x \geq 0 \end{cases}$$

Write the equation of the piecewise function



$y = mx + b$

$y = 1x + b$

$0 = 1(-5) + b$

$0 = -5 + b$

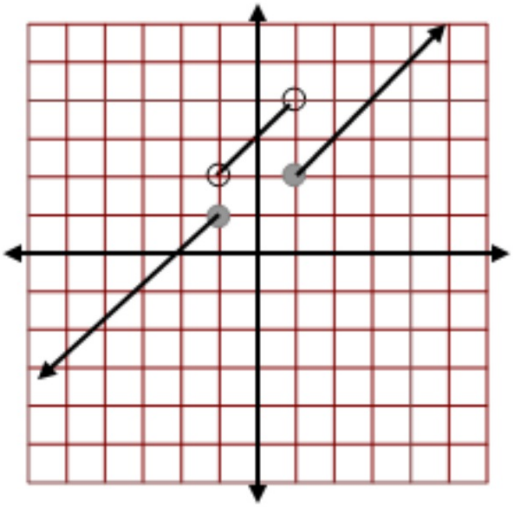
$b = 5$

$x < -2$ $\quad$ $x \geq -2$

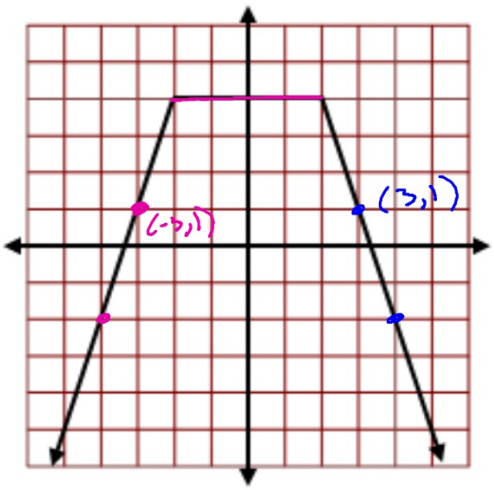
$y = x + 5$ $\quad$ $y = -2$

$$f(x) = \begin{cases} x+5 & x < -2 \\ -2 & x \geq -2 \end{cases}$$

Write the equation of the piecewise function



Write the equation of the piecewise function



$x \le -2$

$m = 3$

$y = mx + b$

$y = 3x + b$

$1 = 3(-3) + b$

$1 = -9 + b$

$10 = b$

$y = 3x + 10$

$-2 < x < 2$

$y = 4$

$x \ge 2$

$m = -3$

$y = mx + b$

$y = -3x + b$

$1 = -3(3) + b$

$1 = -9 + b$

$b = 10$

$y = -3x + 10$

$$f(x) = \begin{cases} 3x+10 & x \le -2 \\ 4 & -2 < x < 2 \\ -3x+10 & x \ge 2 \end{cases}$$