2.7 Piecewise functions

Ex 1a) Evaluate the function for the given value of x.

$$f(x) = \begin{cases} 3x - 7, & \text{if } x \le 2 \\ 6 - 2x, & \text{if } x > 2 \end{cases}$$

1. $f(0)$ 2. $f(2)$ 3. $f(4)$

Ex1b) Evaluate the function for the given value of x.

$$g(x) = \begin{cases} 3x + 5, & \text{if } x < 5 \\ -x + 3, & \text{if } x \ge 5 \end{cases}$$

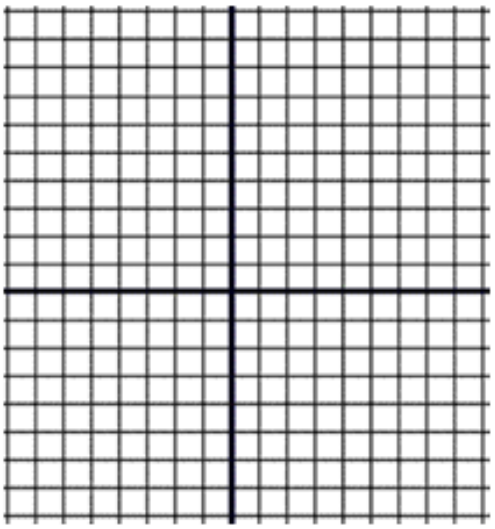
4. $g(5)$ 5. $g(-4)$ 6. $g(3)$

Ex2a) Graph the piecewise function.

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

x	y

x	y

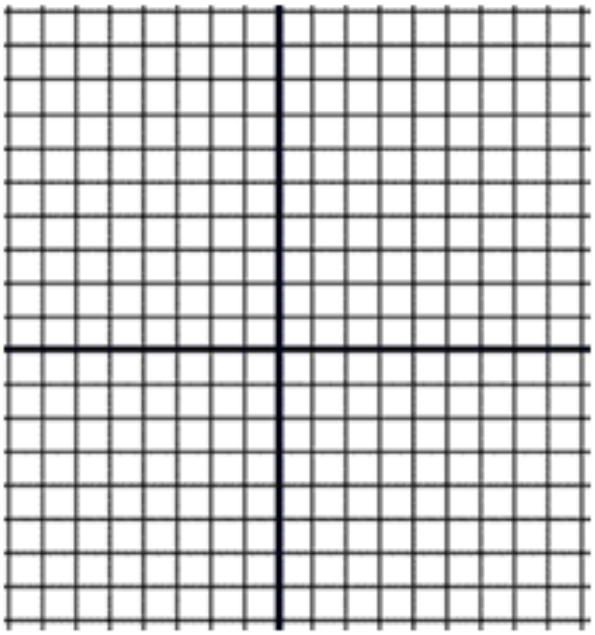


Ex2b) Graph the piecewise function.

$$f(x) = \begin{cases} 2x + 1 \text{ if } x < 1 \\ -x + 4 \text{ if } x \geq 1 \end{cases}$$

x	y

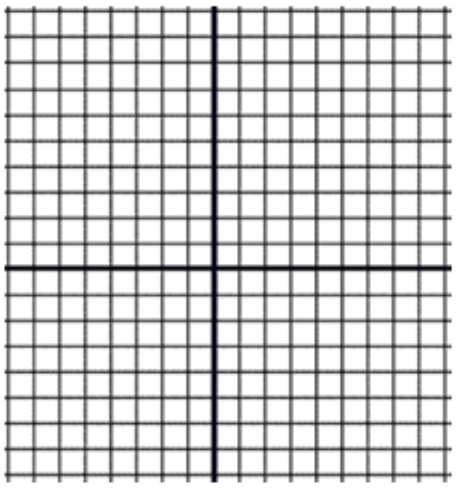
x	y



Ex2c) graph . $f(x) = \begin{cases} x + 3, & \text{if } x \leq 0 \\ 2x, & \text{if } x > 0 \end{cases}$

x	y

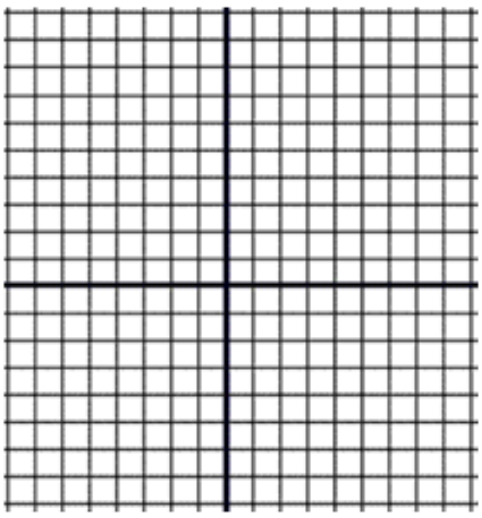
x	y



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

x	y

x	y

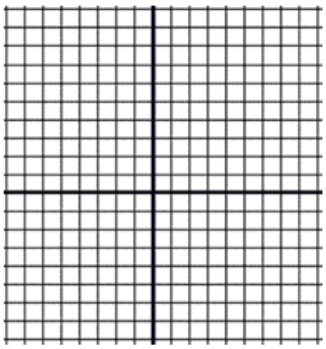


Try 1:

$$f(x) = \begin{cases} \frac{1}{2}x + 4, & \text{if } x < 2 \\ -2x + 9, & \text{if } x \geq 2 \end{cases}$$

x	y

x	y



Try 2:

$$f(x) = \begin{cases} x - 4, & \text{if } x < 2 \\ 3 - x, & \text{if } x \geq 2 \end{cases}$$

x	y

x	y