

Construa os gráficos das seguintes funções reais:

$$1. f(x) = |2x - 1|$$

$$g(x)$$

$$X \mid g(x) = 2x - 1$$

$$\begin{array}{r|l} -2 & -5 \\ 0 & -1 \\ 2 & 3 \end{array}$$

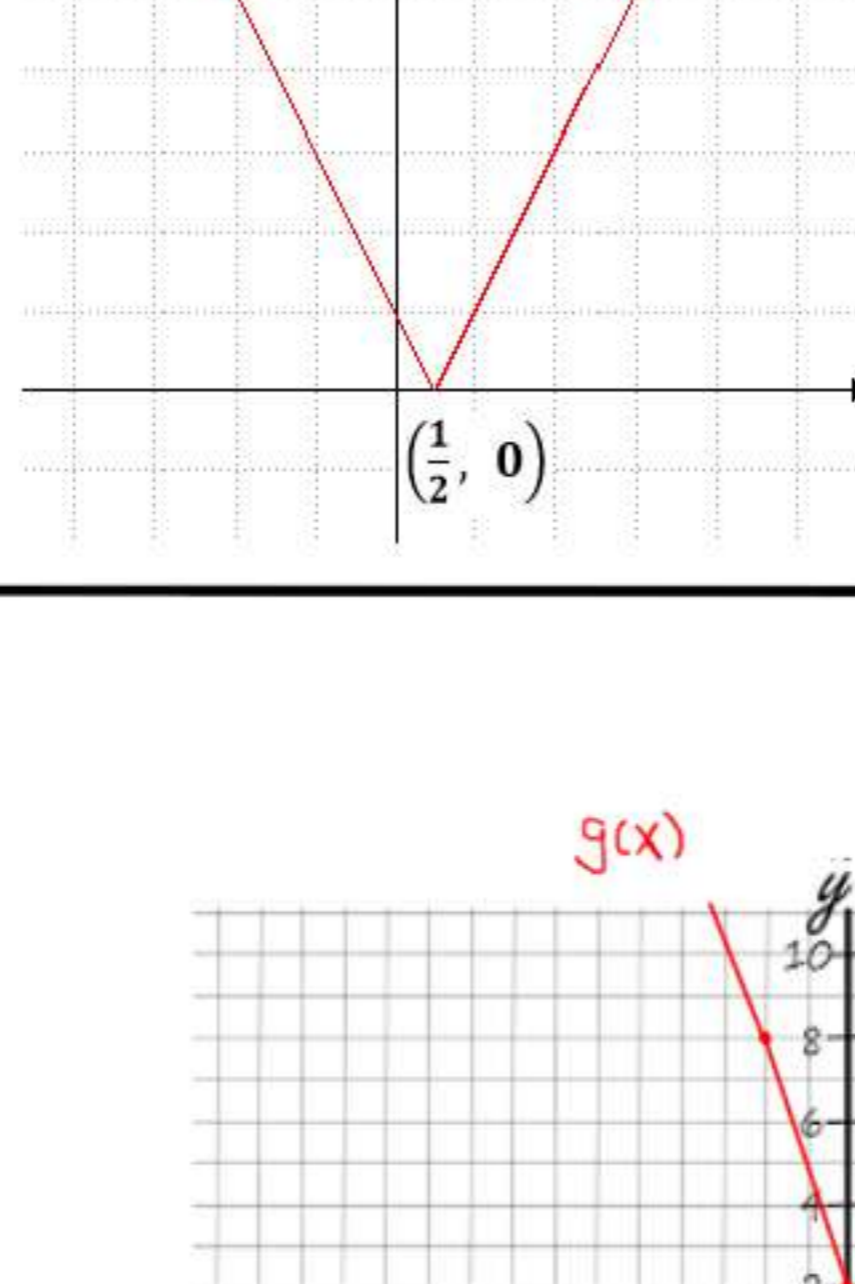
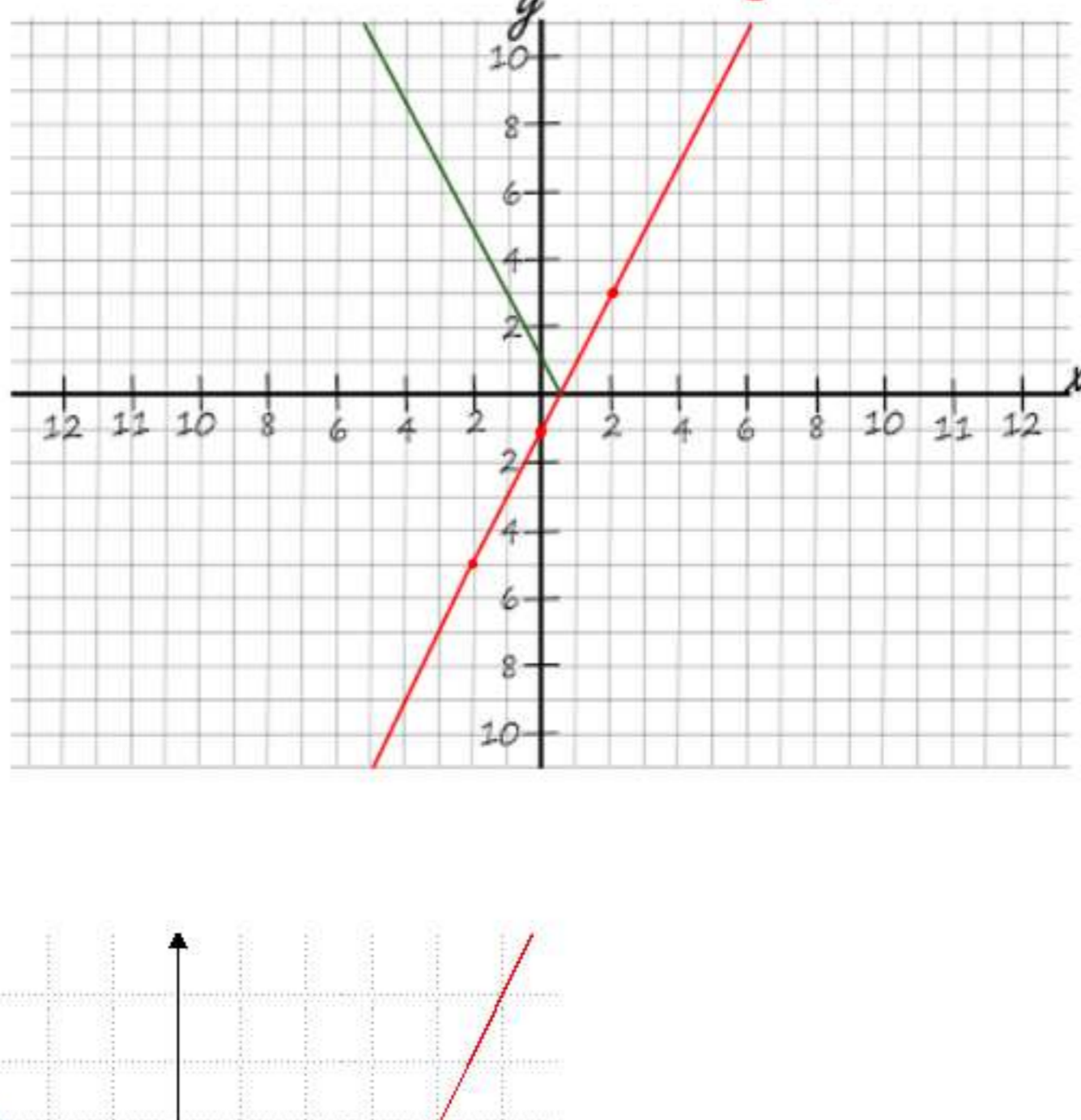
Raiz da Função:

$$2x - 1 = 0$$

$$2x = 1$$

$$x = \frac{1}{2}$$

Rebatendo g(x)



$$2. f(x) = |2 - 3x|$$

$$g(x)$$

$$X \mid g(x) = 2 - 3x$$

$$\begin{array}{r|l} -2 & 8 \\ 0 & 2 \\ 2 & -4 \end{array}$$

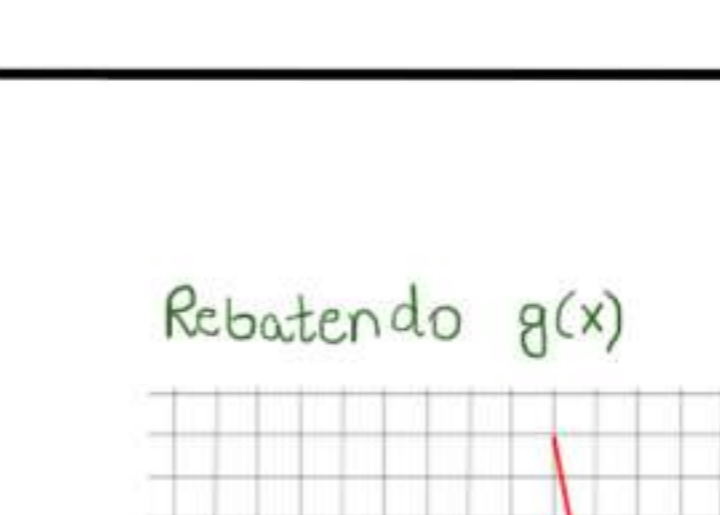
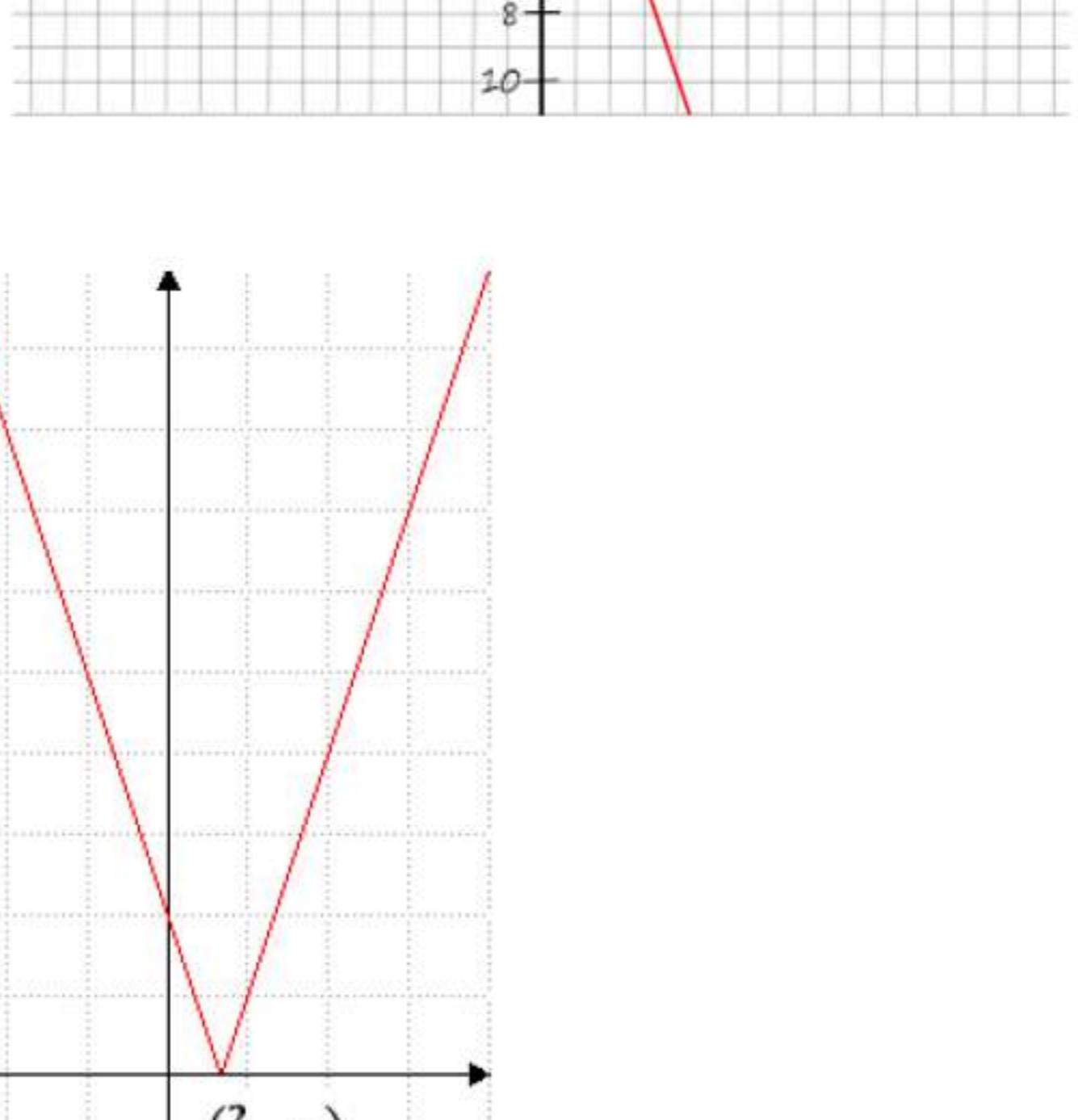
Raiz da Função:

$$2 - 3x = 0$$

$$3x = 2$$

$$x = \frac{2}{3}$$

Rebatendo g(x)



$$3. f(x) = |x^2 + 4x|$$

$$g(x)$$

Raízes da Função:

$$g(x) = x^2 + 4x$$

$$x^2 + 4x = 0$$

$$x(x + 4) = 0$$

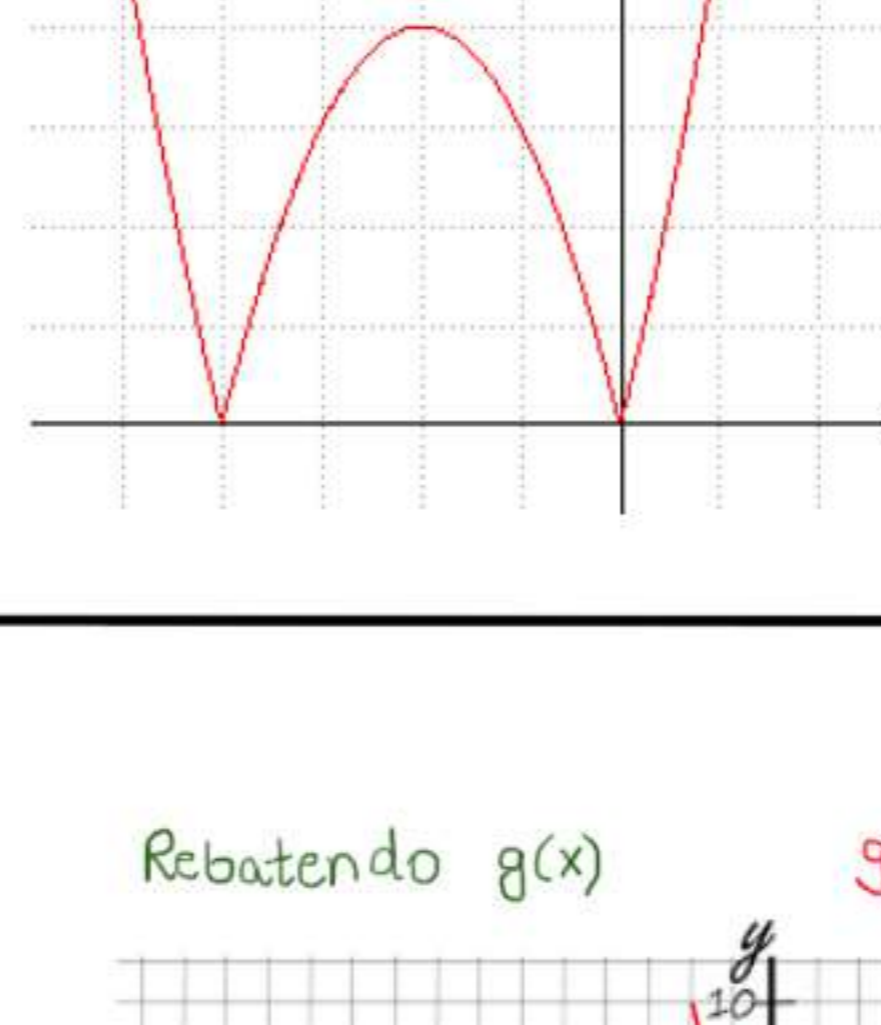
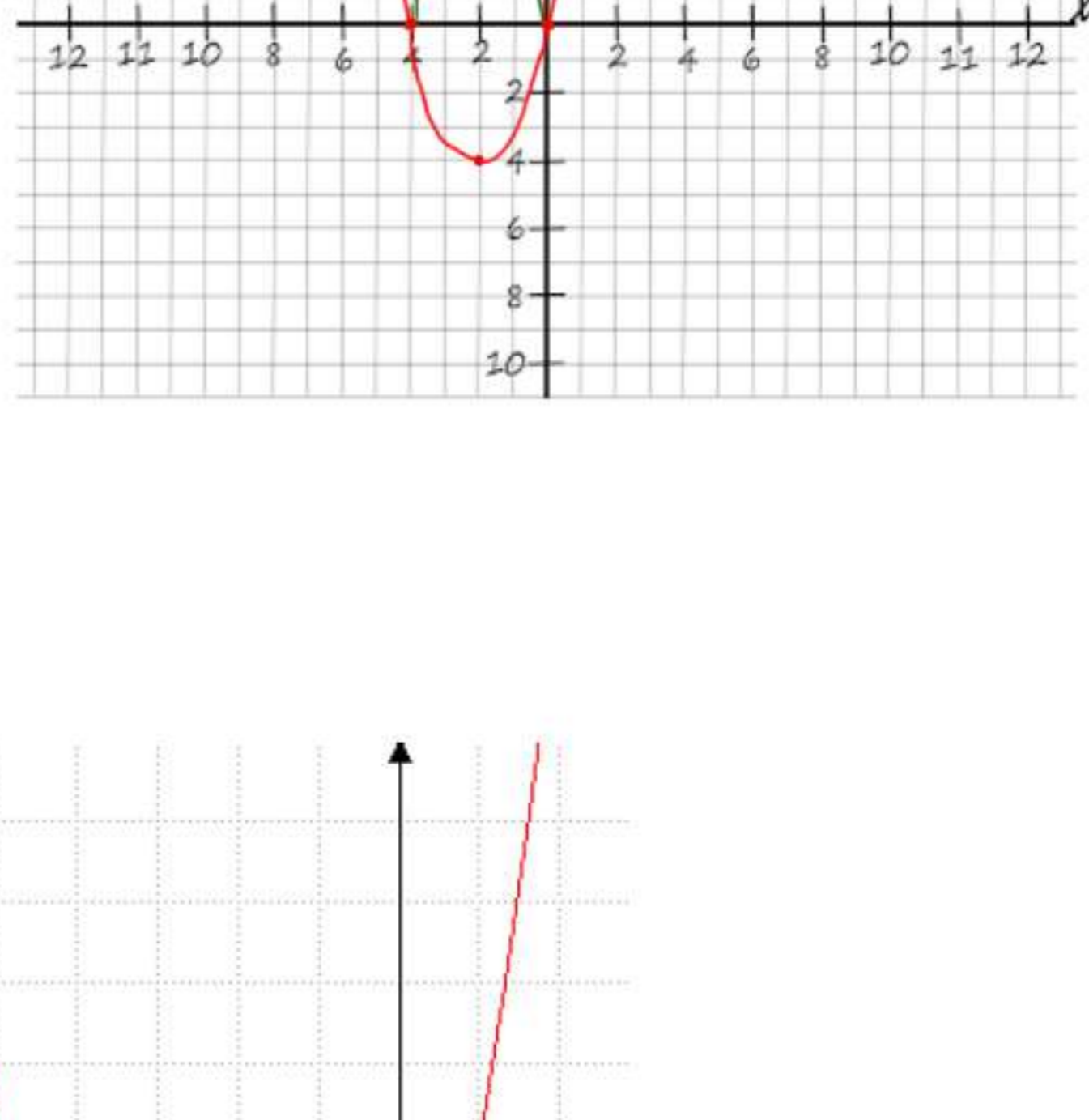
$$x' = 0 \quad x'' = -4$$

Coordenadas do vértice:

$$X_v = -\frac{b}{2a} = -\frac{-4}{2 \cdot 1} = -2$$

$$Y_v = -\frac{\Delta}{4a} = -\frac{(4^2 - 0)}{4 \cdot 1} = -4$$

Rebatendo g(x)



$$4. f(x) = |x^2 - 3x + 2|$$

$$g(x)$$

Raízes da Função:

$$g(x) = x^2 - 3x + 2$$

Da Fórmula de Bhaskara:

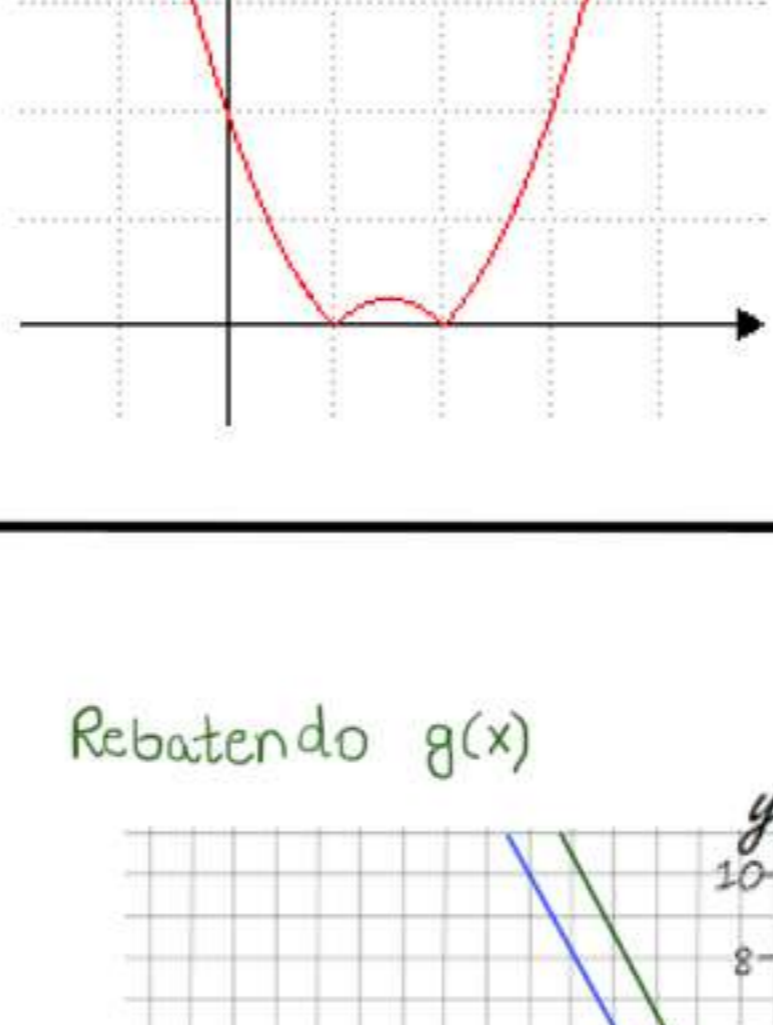
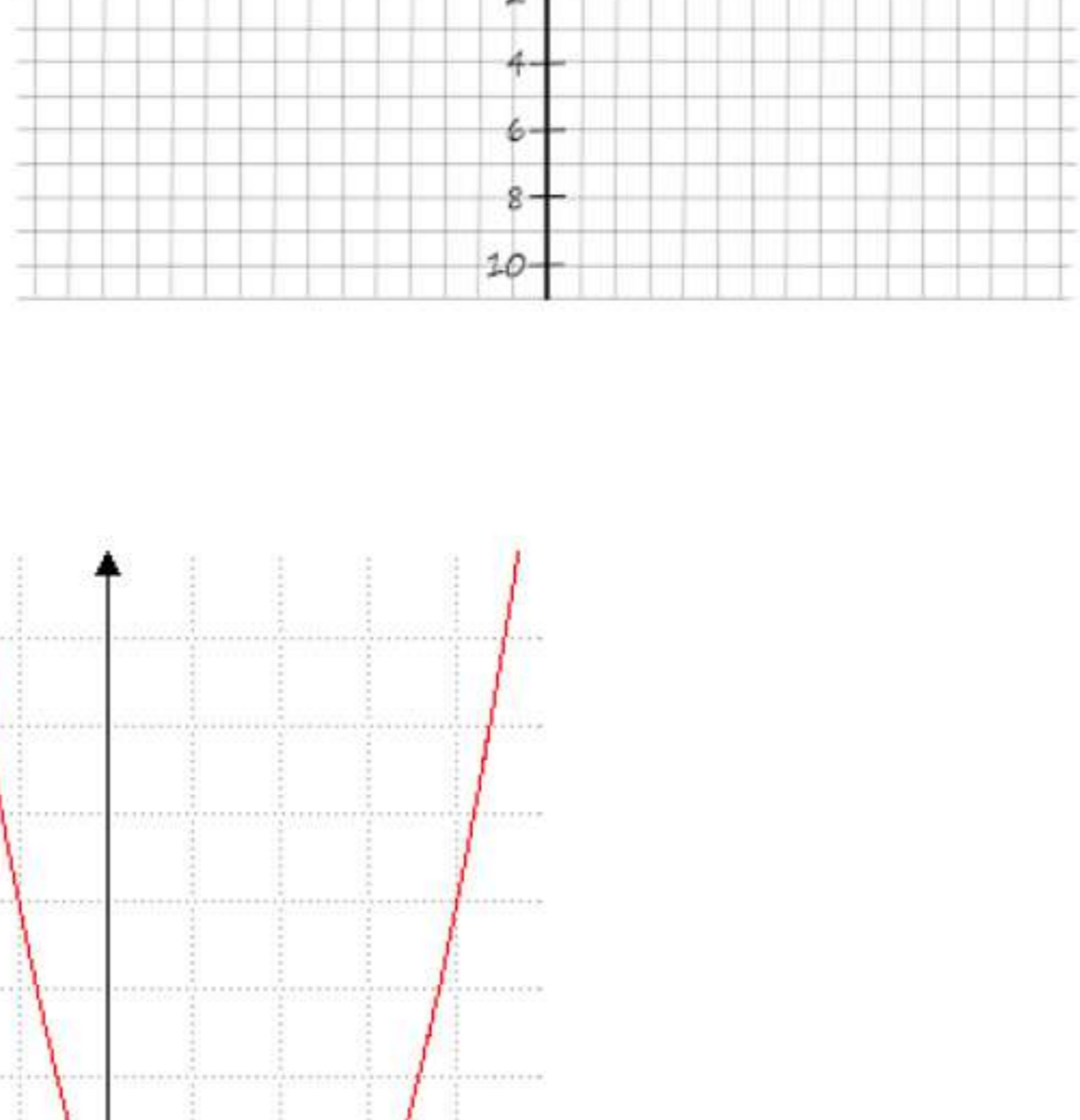
$$x' = 1 \quad x'' = 2$$

Coordenadas do vértice:

$$X_v = -\frac{b}{2a} = -\frac{(-3)}{2 \cdot 1} = +\frac{3}{2}$$

$$Y_v = -\frac{\Delta}{4a} = -\frac{(-3)^2 - 8}{4 \cdot 1} = -\frac{1}{4}$$

Rebatendo g(x)



$$5. f(x) = |2x - 1| - 2$$

$$g(x) \quad \downarrow -2$$

$$X \mid g(x) = 2x - 1$$

$$\begin{array}{r|l} -2 & -5 \\ 0 & -1 \\ 2 & 3 \end{array}$$

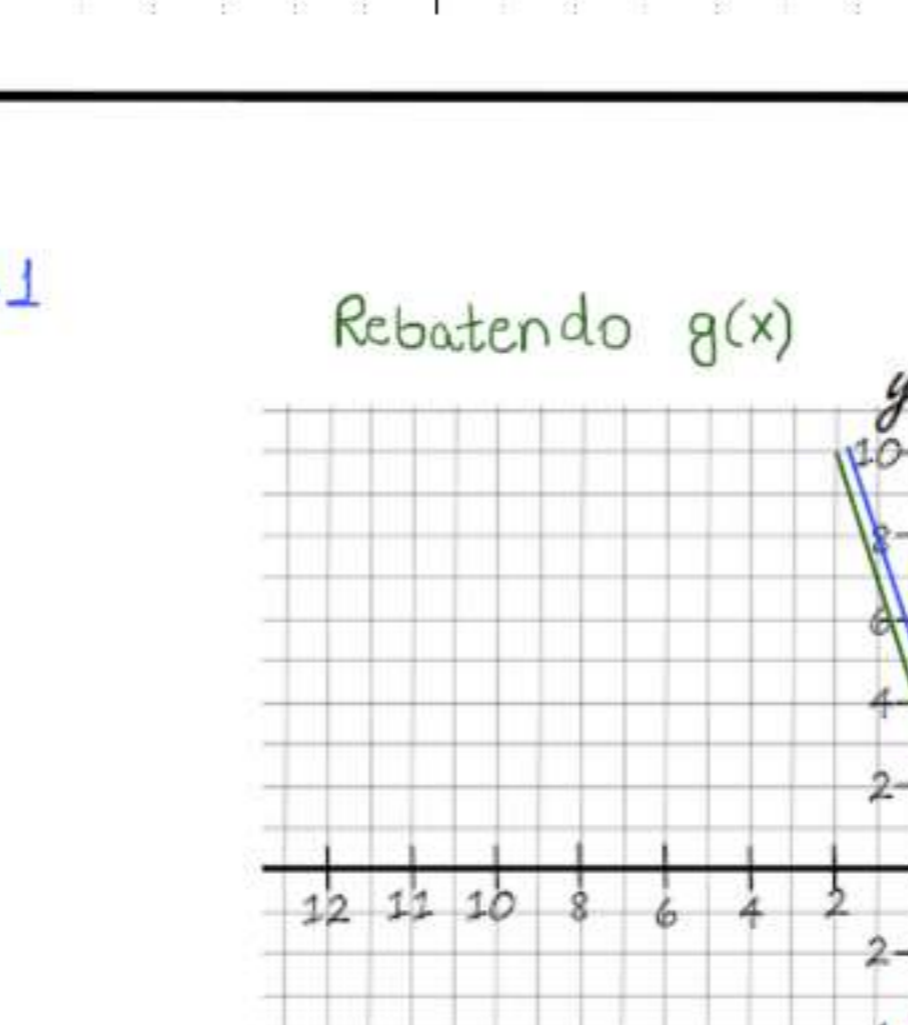
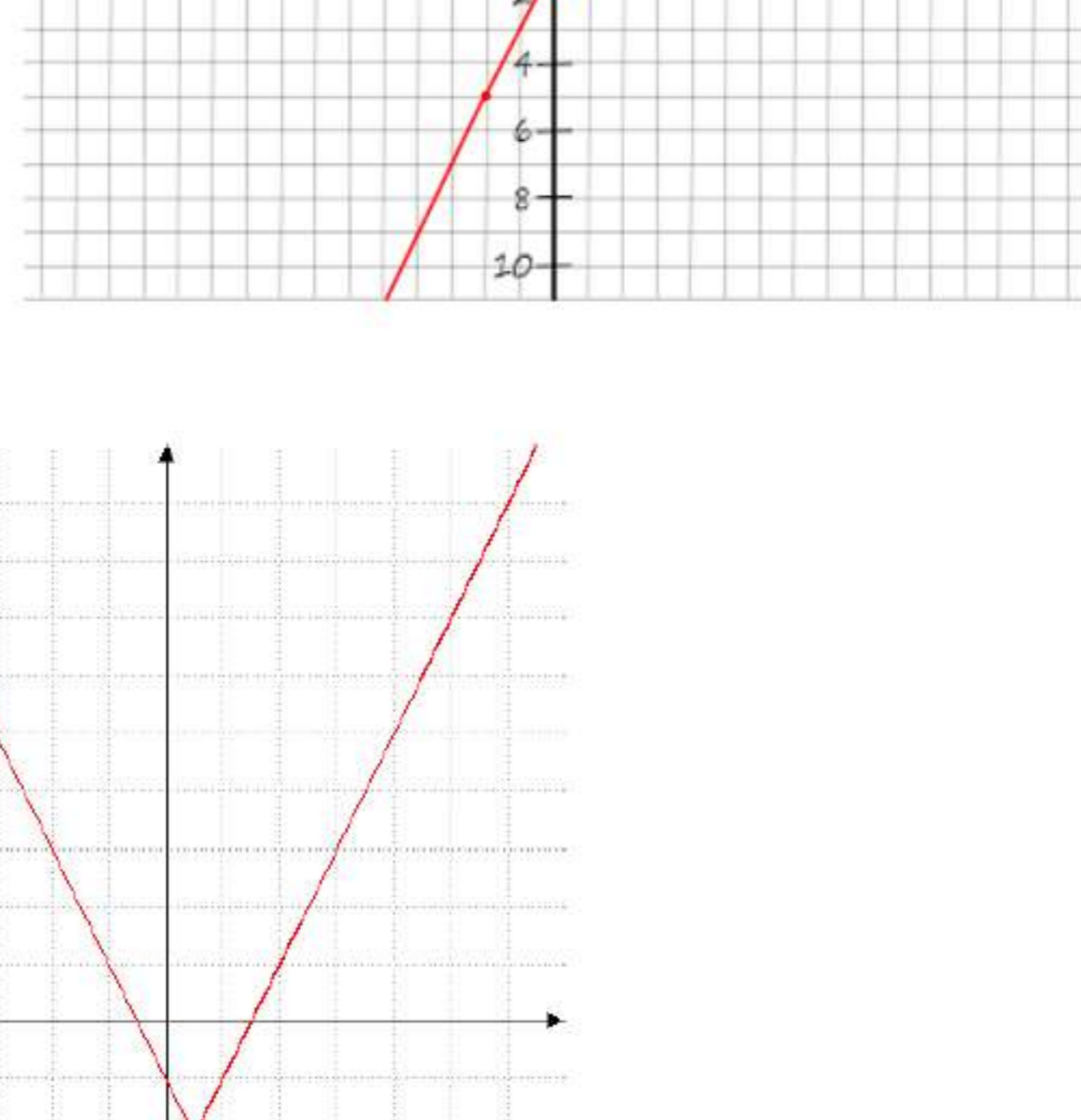
Raiz da Função:

$$2x - 1 = 0$$

$$2x = 1$$

$$x = \frac{1}{2}$$

Rebatendo g(x)



$$6. f(x) = |3x - 4| + 1$$

$$g(x) \quad \uparrow +1$$

$$X \mid g(x) = 3x - 4$$

$$\begin{array}{r|l} -2 & -10 \\ 0 & -4 \\ 2 & 2 \end{array}$$

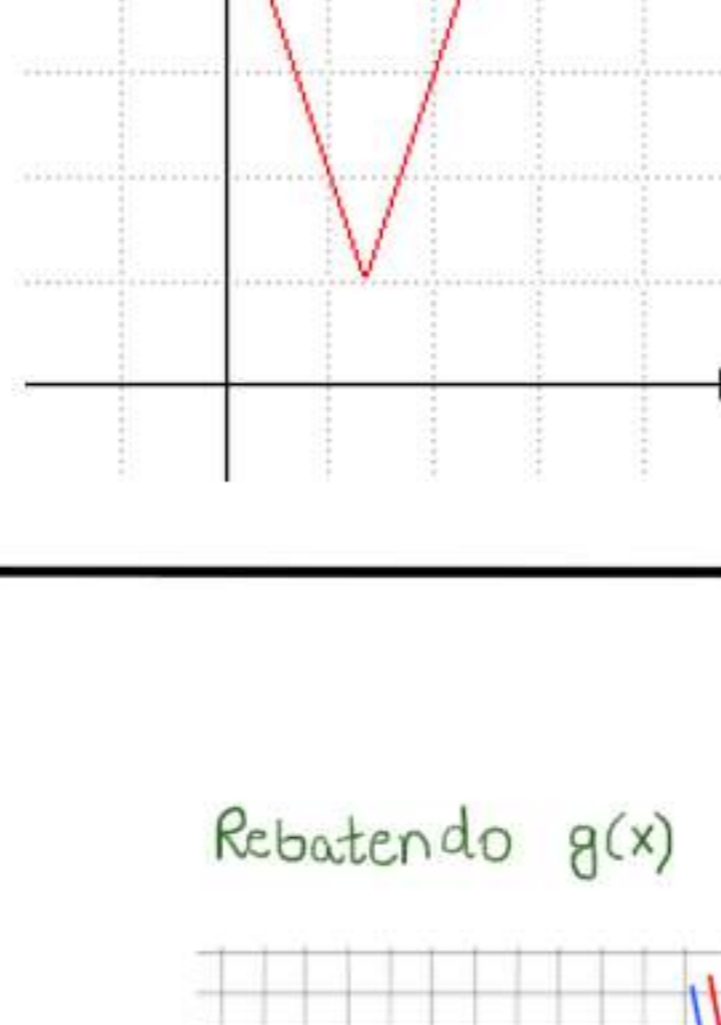
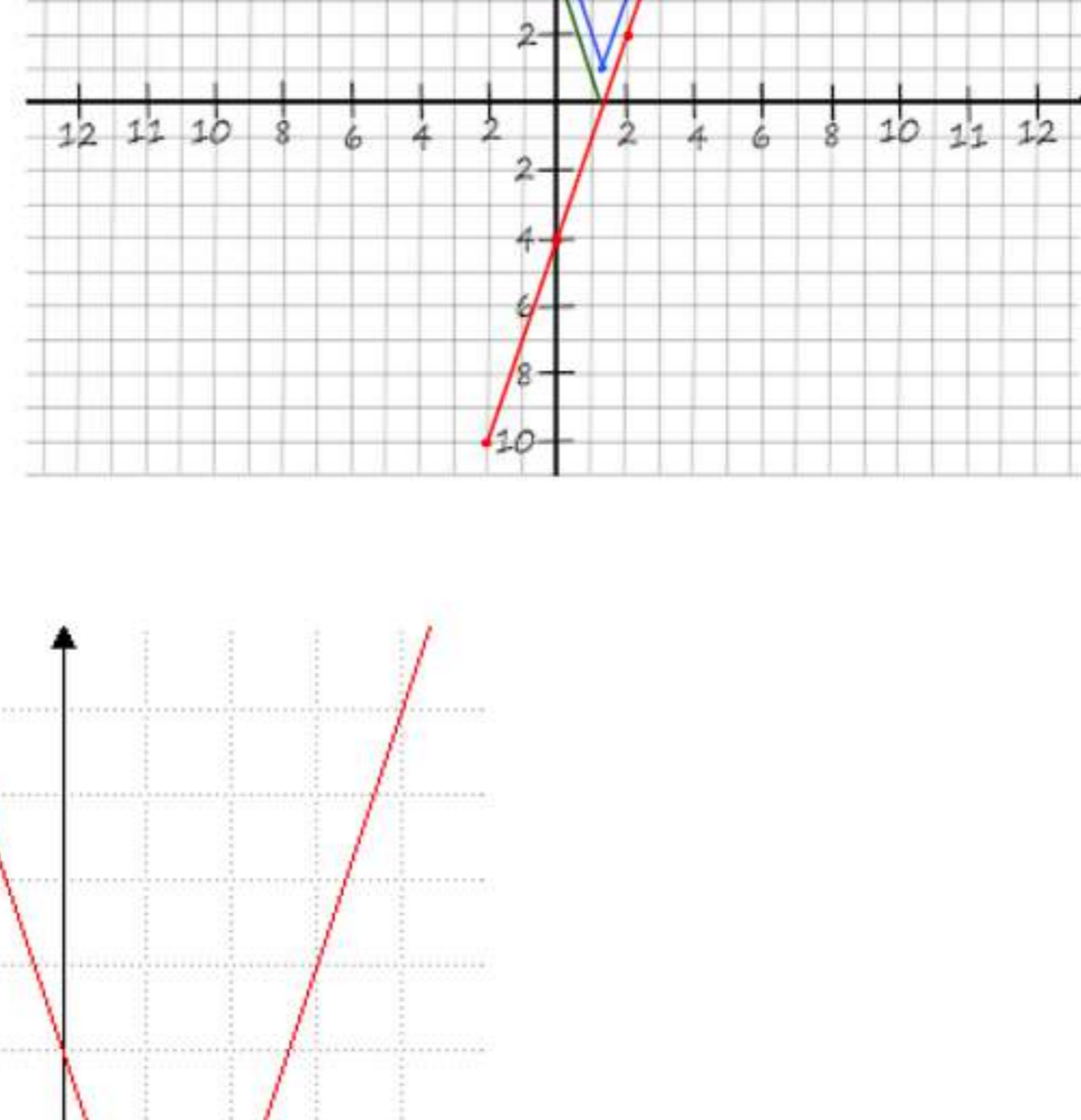
Raiz da Função:

$$3x - 4 = 0$$

$$3x = 4$$

$$x = \frac{4}{3}$$

Rebatendo g(x)



$$7. f(x) = |x^2 - 1| - 2$$

$$g(x) \quad \downarrow -2$$

Raízes da Função:

$$g(x) = x^2 - 1$$

$$x^2 - 1 = 0$$

$$x = \pm \sqrt{1}$$

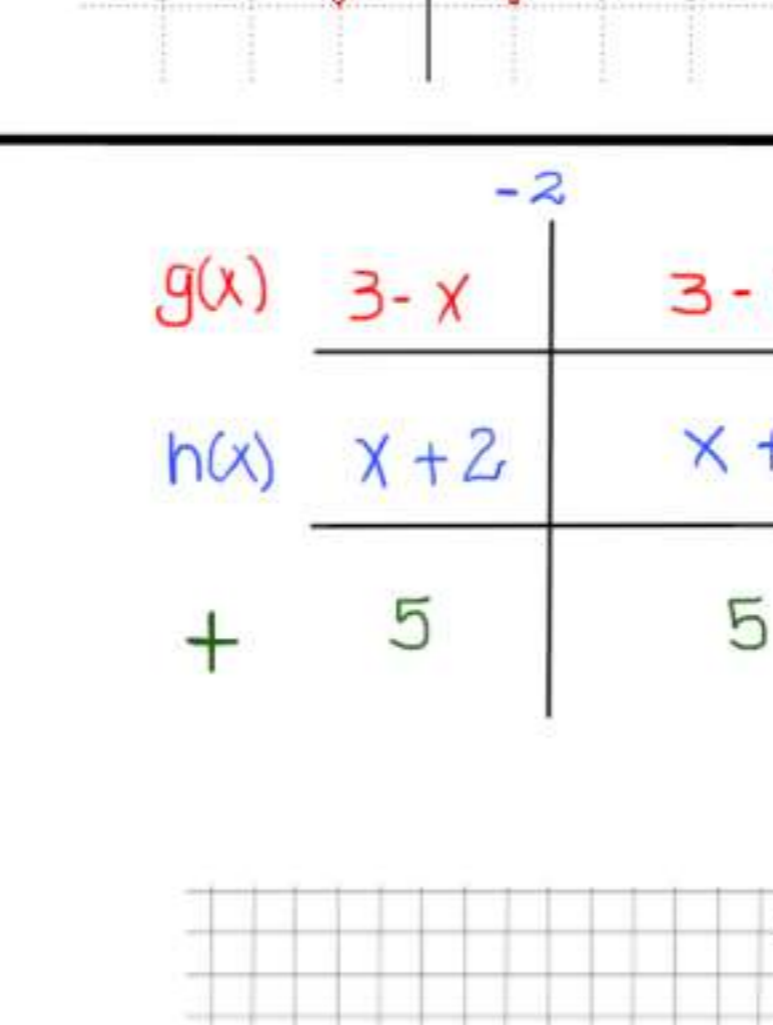
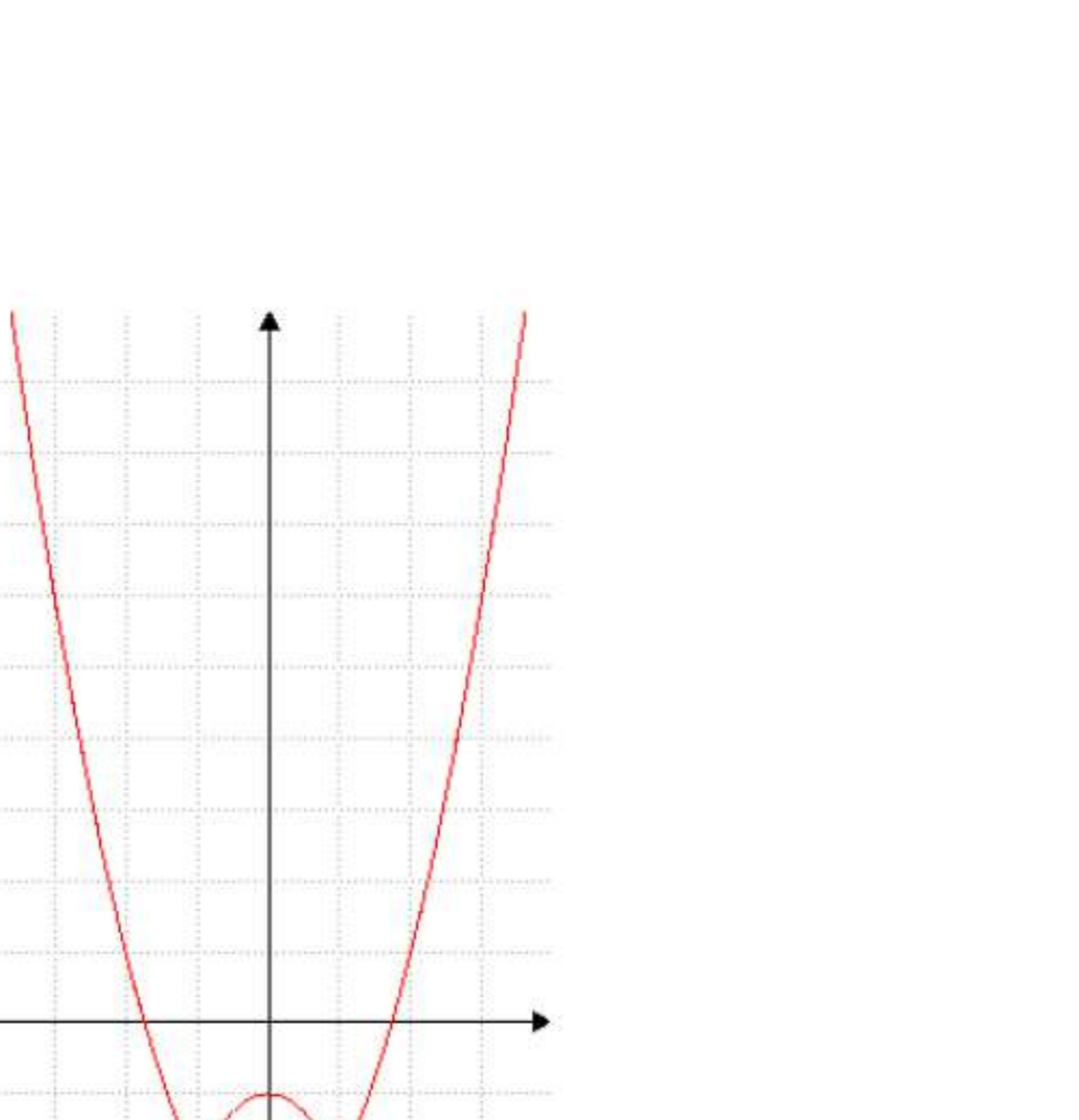
$$x' = -1 \quad x'' = +1$$

Coordenadas do vértice:

$$X_v = -\frac{b}{2a} = \frac{-0}{2 \cdot 1} = 0$$

$$Y_v = -\frac{\Delta}{4a} = \frac{-(-4 \cdot 1 - 0)}{4 \cdot 1} = -1$$

Rebatendo g(x)

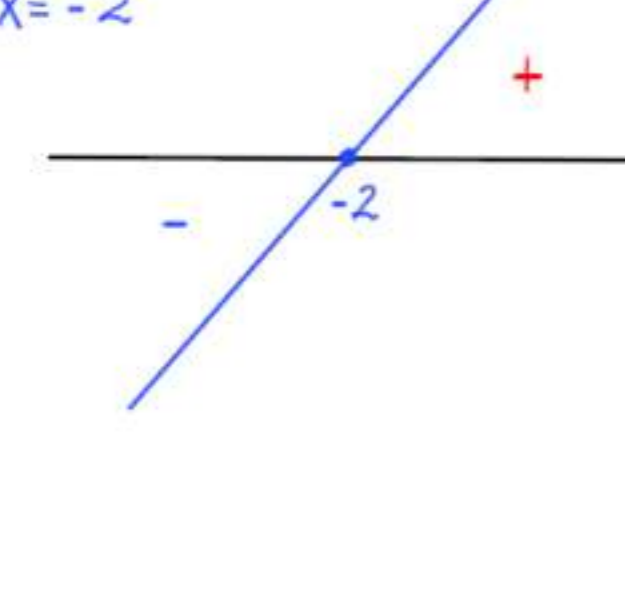


$$8. f(x) = |x - 3| + |x + 2|$$

$$g(x) \quad h(x)$$

$$x - 3 = 0$$

$$x = 3$$

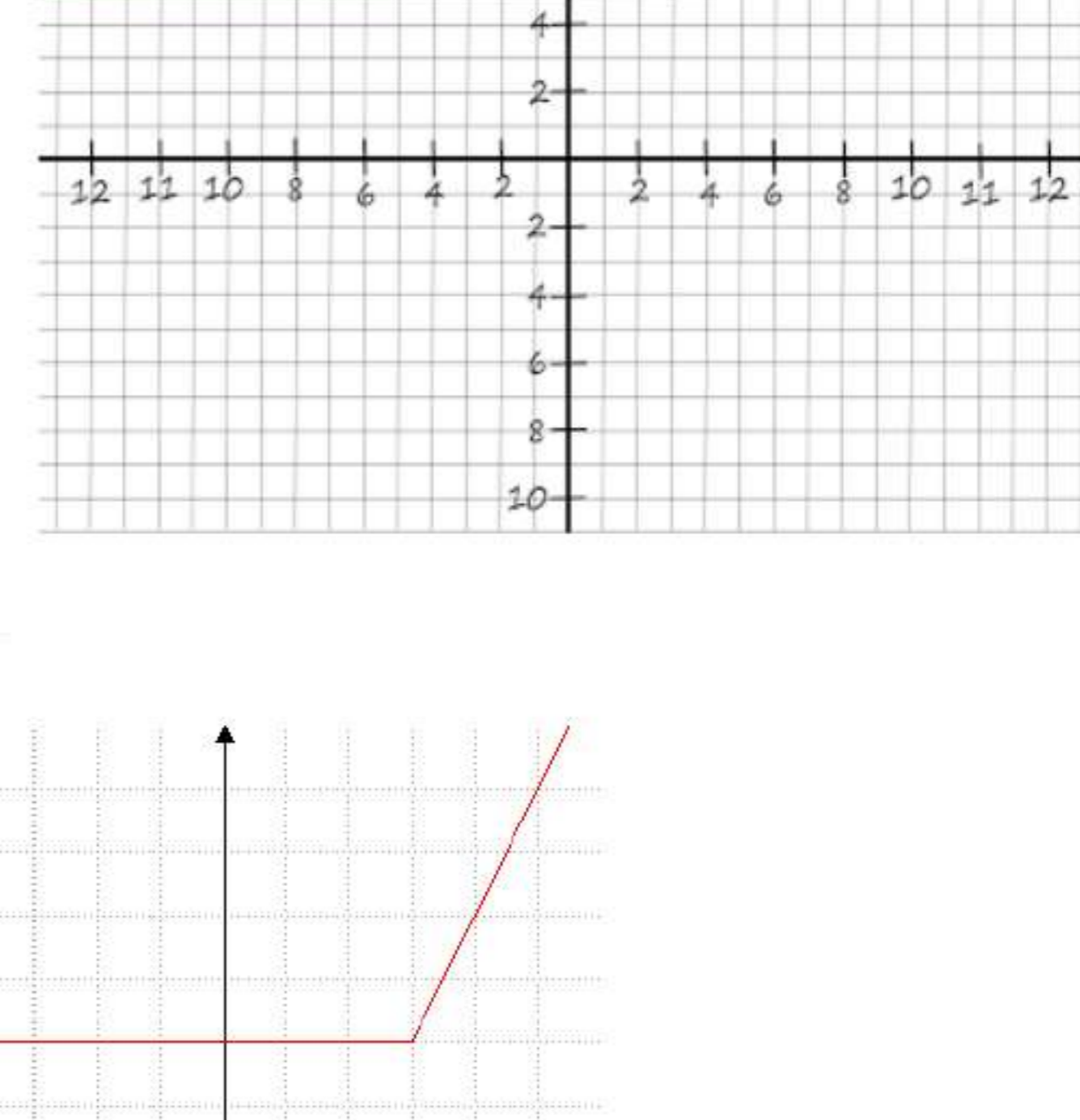


$$x + 2 = 0$$

$$x = -2$$



	-2	3	
g(x)	3 - x	3 - x	x - 3
h(x)	x + 2	x + 2	x + 2
	+	5	5
	+	5	2x - 1

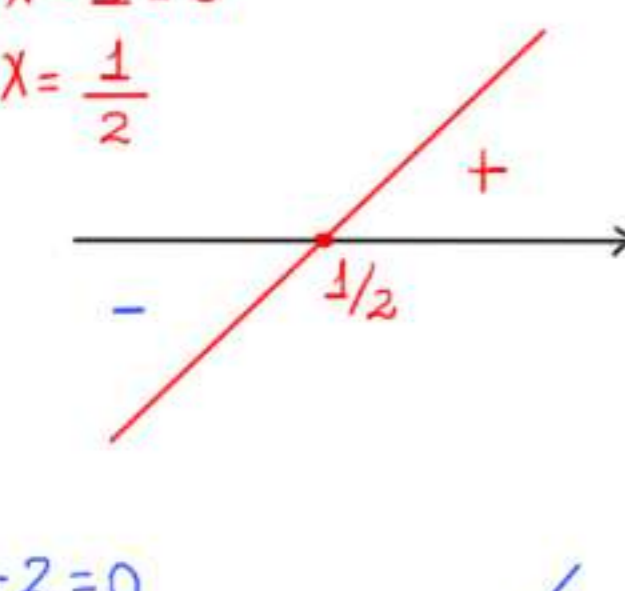


$$9. f(x) = |2x - 1| + |x - 2|$$

$$g(x) \quad h(x)$$

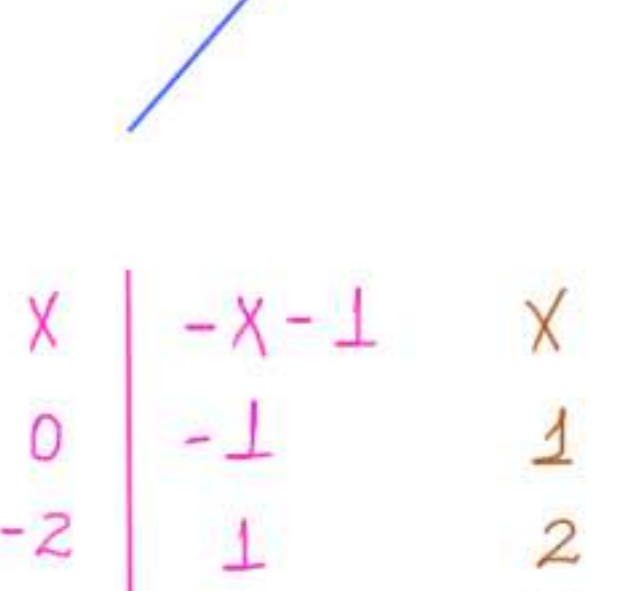
$$2x - 1 = 0$$

$$x = \frac{1}{2}$$

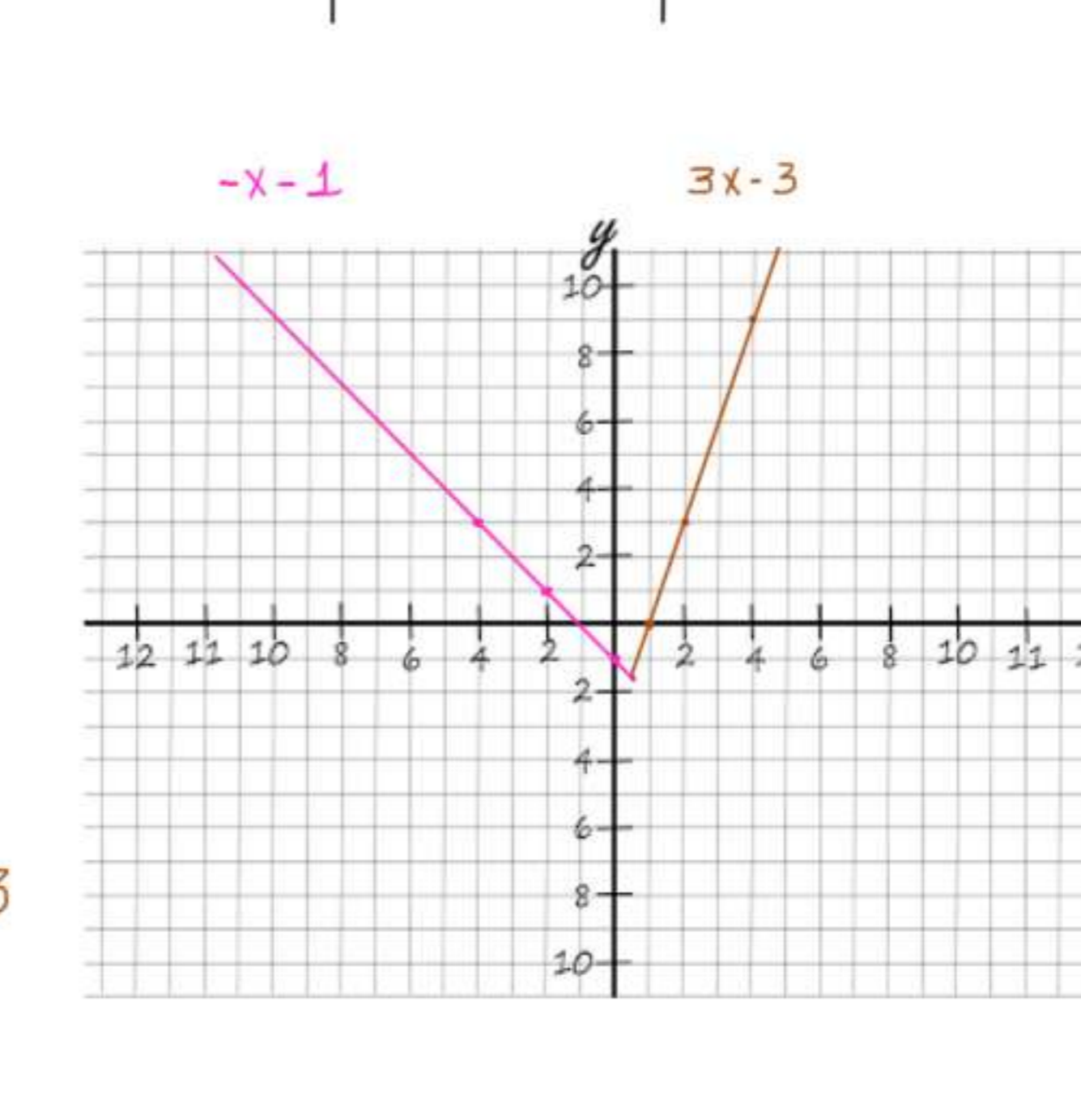


$$x - 2 = 0$$

$$x = 2$$



	1/2	2	
g(x)	1 - 2x	2x - 1	2x - 1
h(x)	x - 2	x - 2	x - 2
	+	-x - 1	3x - 3
	+	-x - 1	3x - 3



X	-x - 1	X	3x - 3
0	-1	1	0
-2	1	2	3
-4	3	4	9

