

FUNÇÃO AFIM

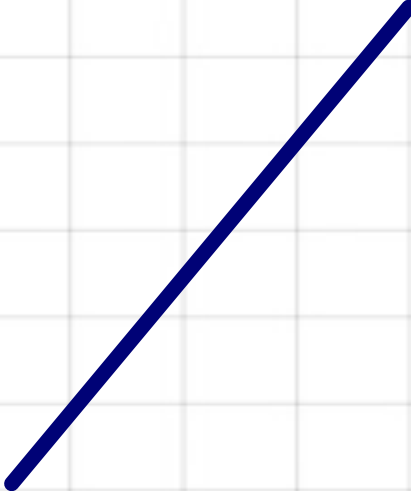
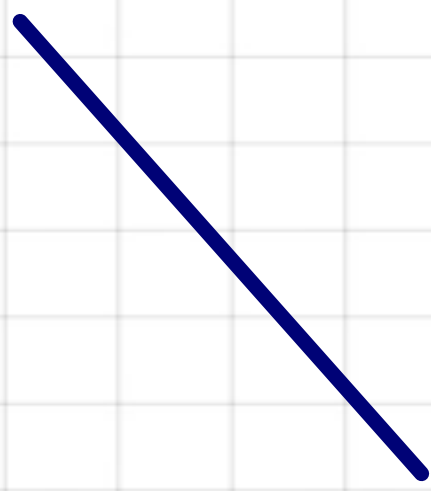
É toda função $f: \mathbb{R} \rightarrow \mathbb{R}$
da forma $f(x) = ax + b$,
sendo $a, b \in \mathbb{R}$ e $a \neq 0$

Ex: $f(x) = 4x + 12$
[$a = 4$ $b = 12$]

$a \rightarrow$ coeficiente angular
• Taxa de variação
• Inclinação

$b \rightarrow$ coeficiente linear

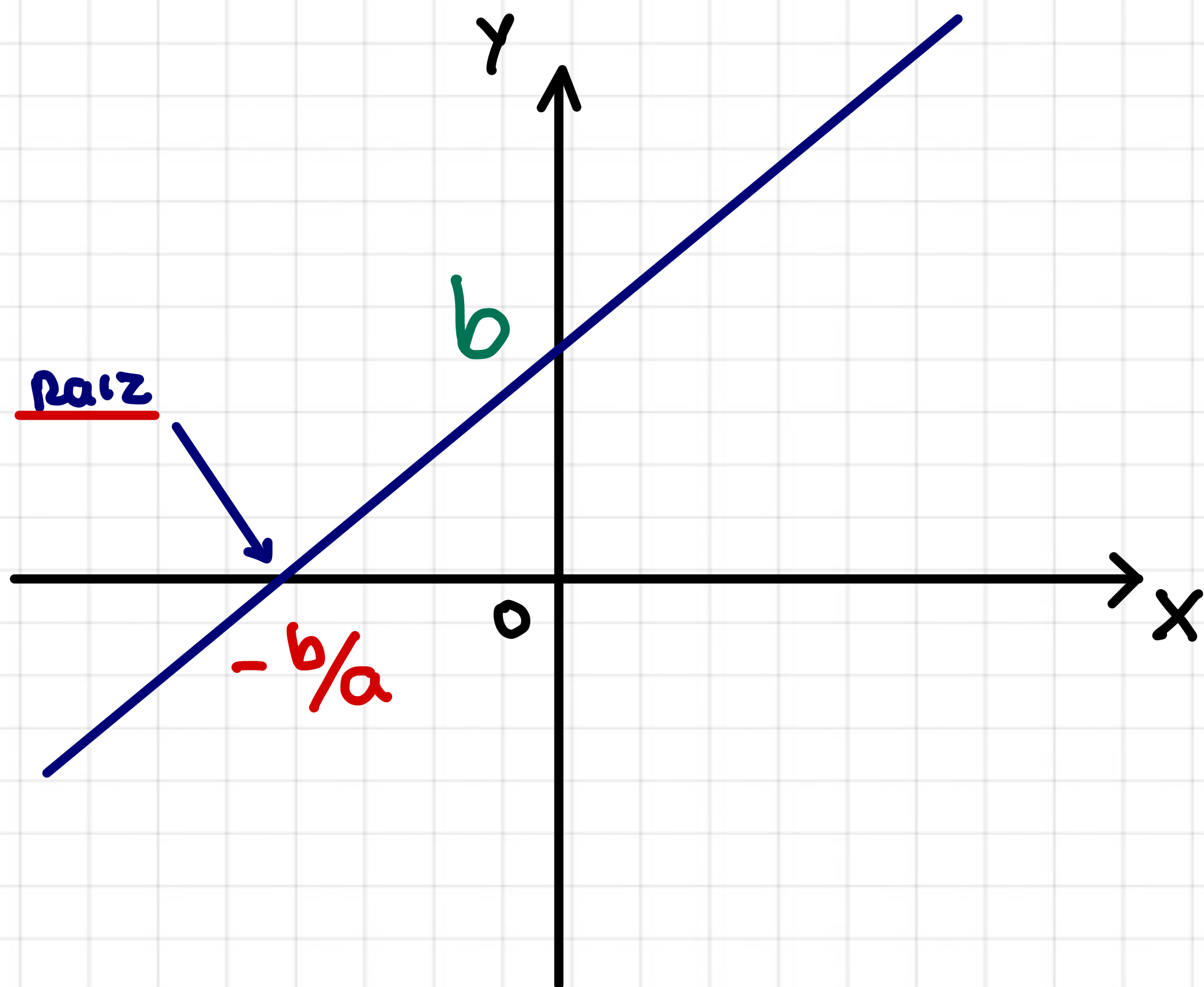
Gráfico: Reto

Se $a > 0$	Se $a < 0$
Função Crescente	Função Decrescente
	

Esboço do Gráfico

$$y = ax + b$$

Ex:



Intenções:

1º) Com o eixo y :

Nesse caso, temos $x = 0$. Logo,

$$y = a \cdot 0 + b \longrightarrow y = b$$

2º) Com o eixo x :

Nesse caso, temos $y = 0$. Logo,

$$0 = ax + b$$

$$-b = ax \longrightarrow x = -b/a$$

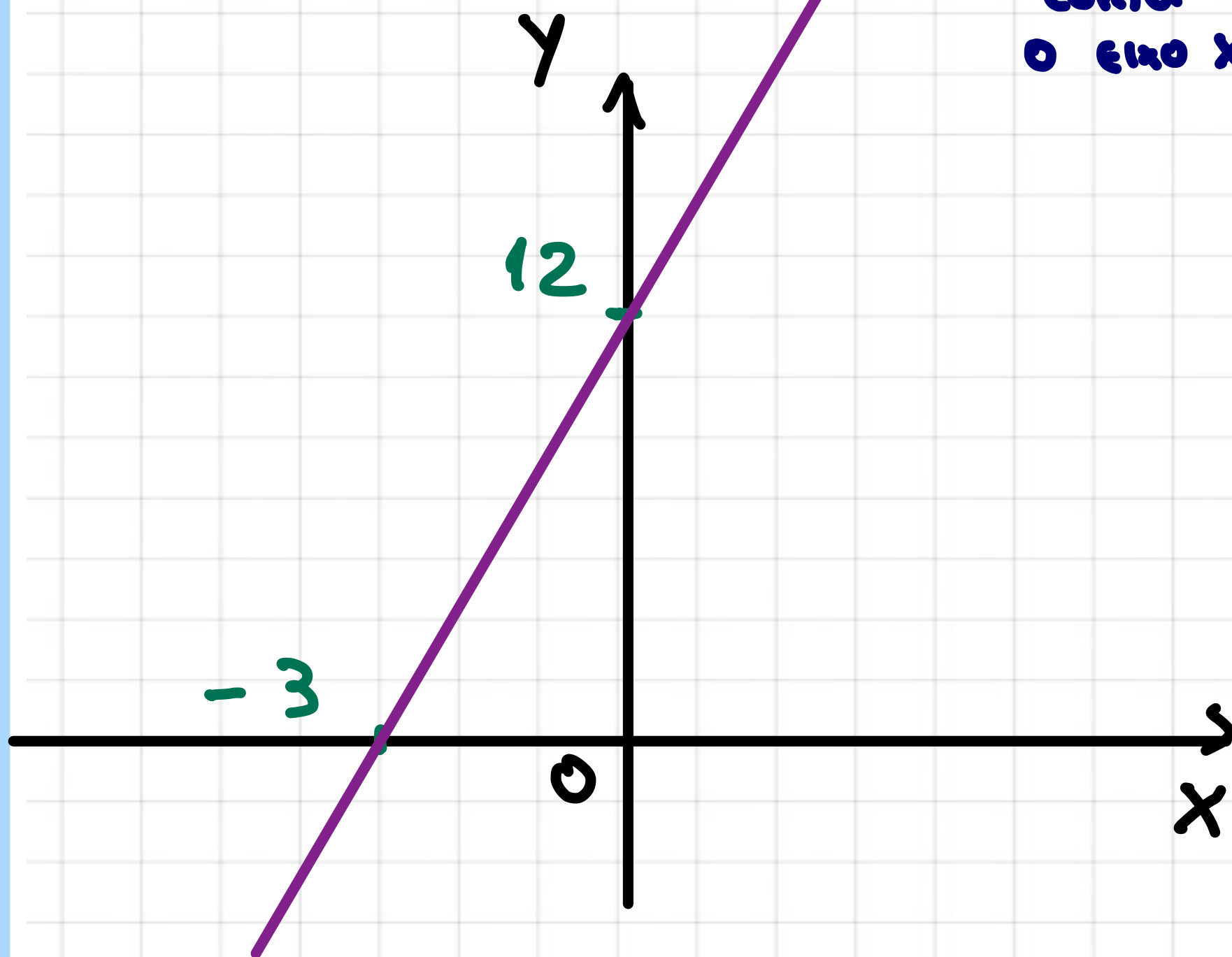
Ex: Esboçar o gráfico de cada função:

a) $f(x) = 4x + 12$

$a = 4$

$b = 12$ conta o eixo y

Raiz: $4x + 12 = 0$
 $4x = -12 \rightarrow x = -3$ conta o eixo x

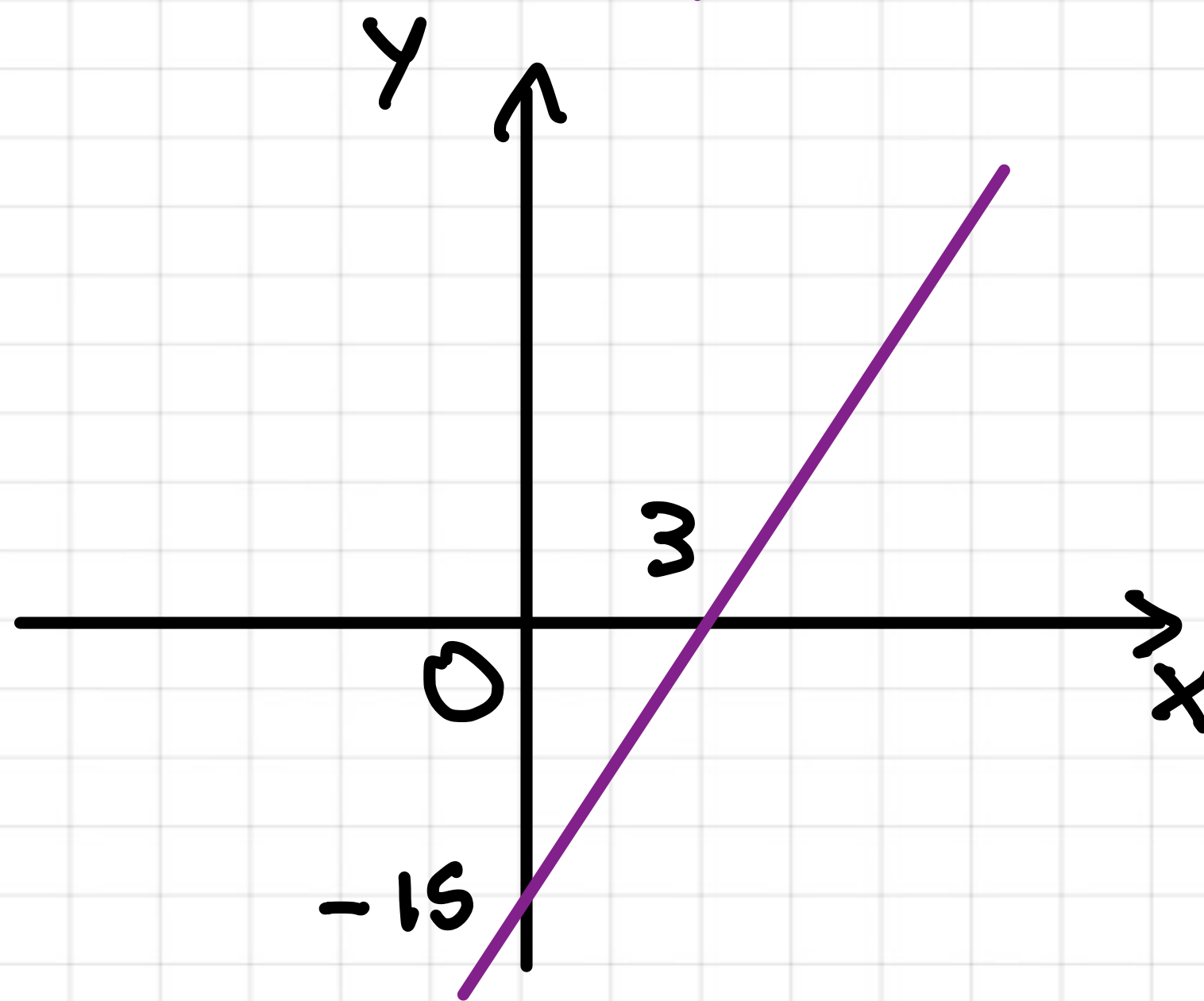


b) $y = 5x - 15$

$a = 5$

$b = -15$

Raiz: $5x - 15 = 0$
 $5x = 15$
 $x = 3$

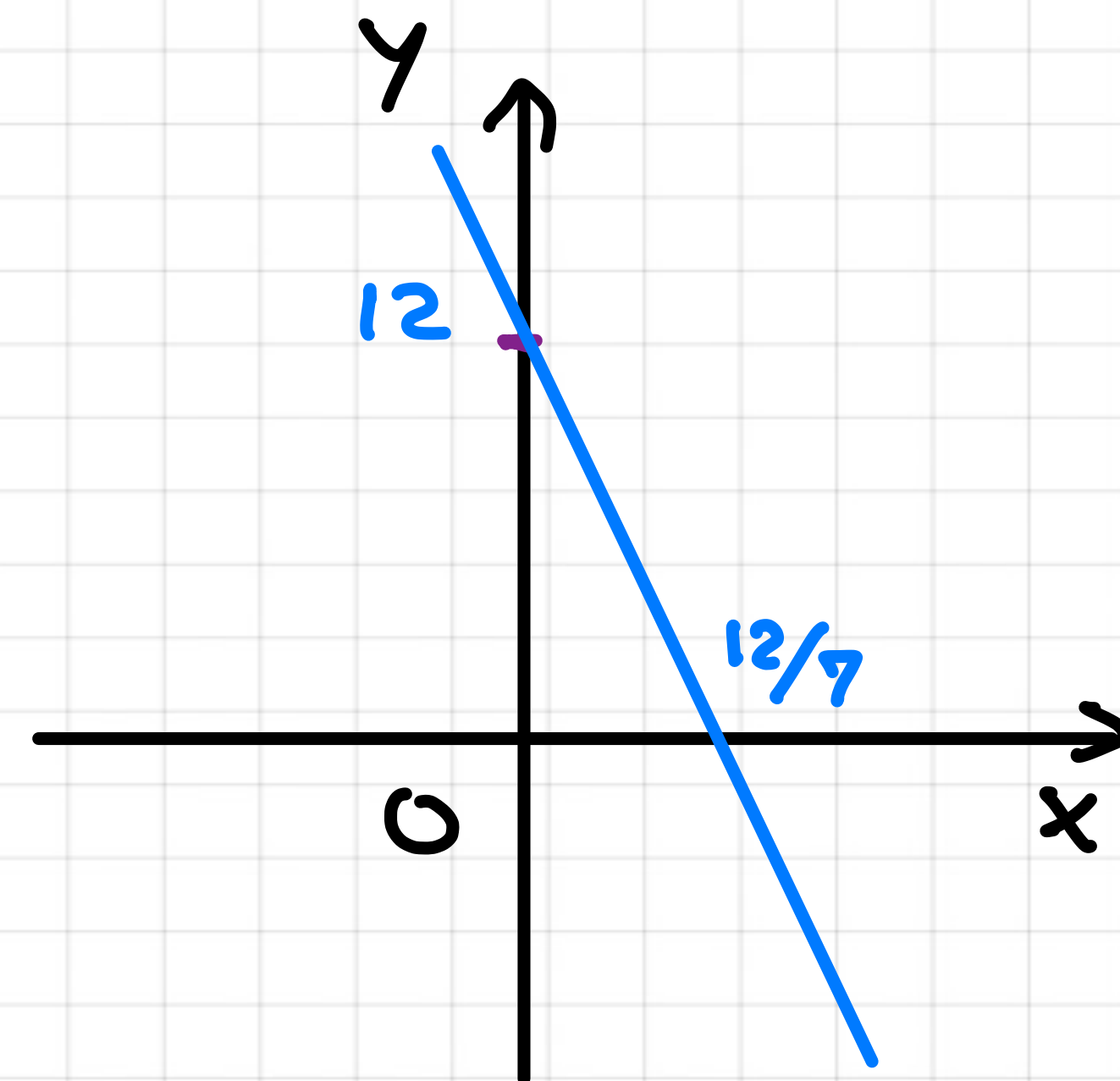


c) $y = -7x + 12$

$a = -7$

$b = 12$

Raiz: $-7x + 12 = 0$
 $(-1) -7x = -12 \quad (-1)$
 $7x = 12 \rightarrow x = \frac{12}{7}$





$$d) y = -\sqrt{3}x - \frac{\sqrt{3}}{3}$$

$$a = -\sqrt{3}$$

$$b = -\frac{\sqrt{3}}{3}$$

$$\text{Raiz: } -\sqrt{3}x - \frac{\sqrt{3}}{3} = 0$$

$$(-1) \quad -\sqrt{3}x = \frac{\sqrt{3}}{3} \quad (-1)$$

$$\cancel{\sqrt{3}}x = \frac{\cancel{\sqrt{3}}}{3}$$

$$x = -\frac{1}{3}$$

