



**9º
ano**

ENSINO FUNDAMENTAL



PROFESSOR (A):

**WAGNER
FILHO**



DISCIPLINA:

MATEMÁTICA



CONTEÚDO:

**INEQUAÇÃO
DO 1º GRAU**



DATA:

15/09/2020

Inequação do 1º grau

Denominamos inequação toda sentença matemática aberta expressa por uma desigualdade. (\neq ; $<$; $>$; \leq ; \geq)

As inequações do 1º grau com uma incógnita podem ser escritas em uma destas formas:

$$\{ax + b > 0\}, \{ax + b < 0\}, ax + b \geq 0, ax + b \leq 0, \text{ com } a \text{ e } b \text{ reais } (a \neq 0).$$

Exemplos

$$\bullet 2x - 7 \geq 0$$

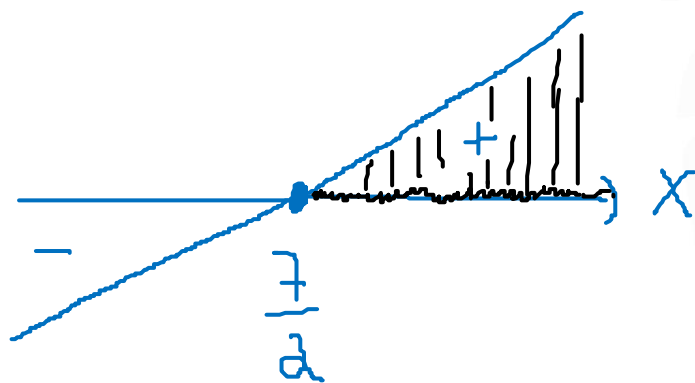
$$\bullet \frac{3x}{5} + \frac{7}{2} < 0$$

$$\bullet 2x - \frac{1}{2} \leq 0$$

$$+2x - 7 \geq 0$$

$$2x \geq 7$$

$$x \geq \frac{7}{2}$$



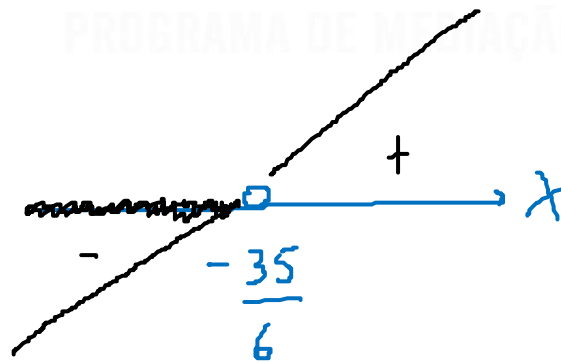
$$\left(\frac{+3x}{5} + \frac{7}{2}\right) < 0$$

$$\frac{6x + 35}{10} < 0$$

$$6x + 35 < 0$$

$$6x < -35$$

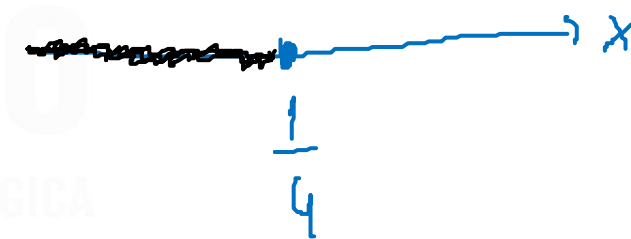
$$x < -\frac{35}{6}$$



$$+2x - \frac{1}{2} \leq 0$$

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

$$x \leq \frac{1}{4}$$



INEQUAÇÕES PRODUTO

$$\text{Ex: } \underbrace{(x+2)}_{f(x)} \cdot \underbrace{(x-3)}_{g(x)} \geq 0$$

$$f(x) = +x + 2$$

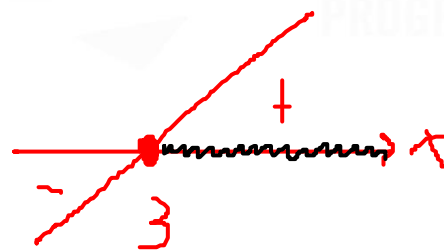
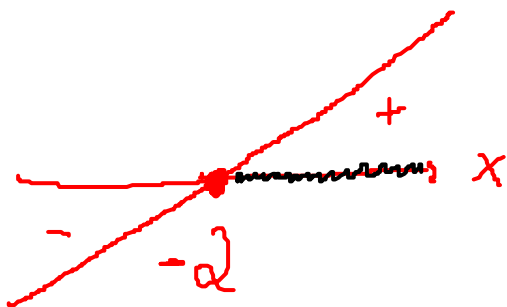
$$x + 2 = 0$$

$$x = -2$$

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

$$x - 3 = 0$$

$$x = 3$$

TABELA DE SINAIS

	-	-2	+	3	+
f(x)	----- ----- -----				
g(x)	----- ----- -----				
f(x) · g(x)	----- ----- -----				
		-2		3	

$$S = \{x \in \mathbb{R} / x \leq -2 \text{ ou } x \geq 3\}$$

$$\text{Ex: } \underbrace{(-3x+9)}_{f(x)} \cdot \underbrace{(x-4)}_{g(x)} < 0$$

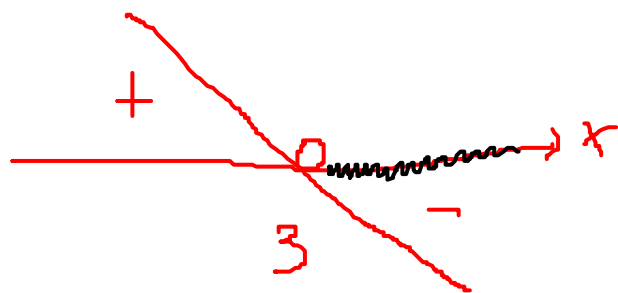
$$f(x) = -3x + 9$$

$$-3x + 9 = 0$$

$$-3x = -9$$

$$x = \frac{-9}{-3}$$

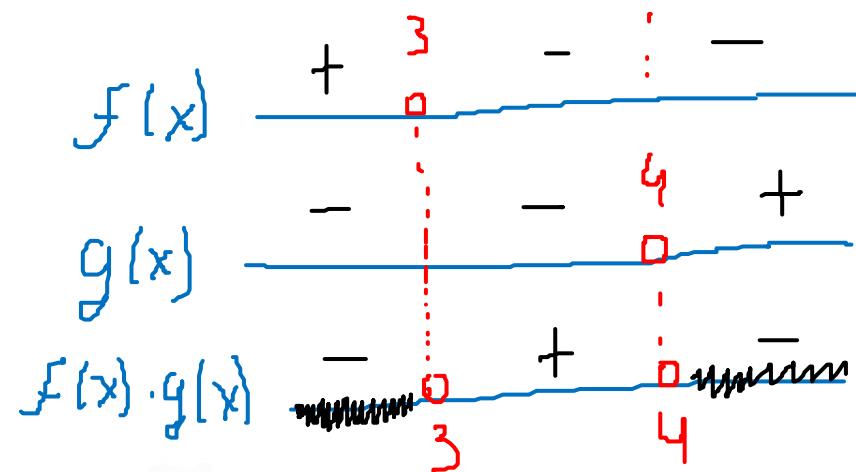
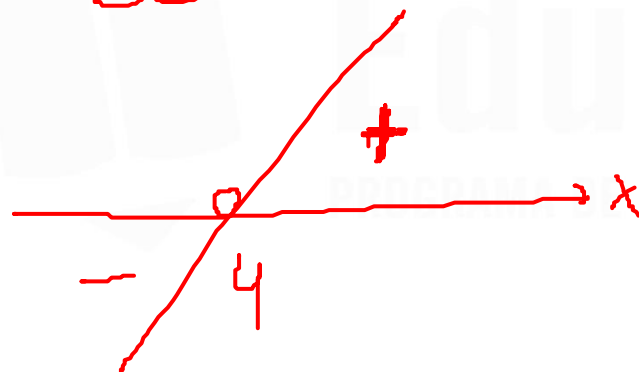
$$x = 3$$



$$g(x) = x - 4$$

$$x - 4 = 0$$

$$x = 4$$



$$S = \{x \in \mathbb{R} / x < 3 \text{ ou } x > 4\}$$

Para Casa

Resolva!

$$(A) (5x - 10) \cdot (-3x + 3) > 0$$

$$(B) (-x + 4) (-2x + 2) \leq 0$$