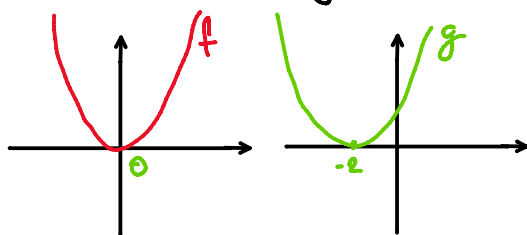


Funções de \mathbb{R} em \mathbb{R} - parte 3 (T4)

Translações

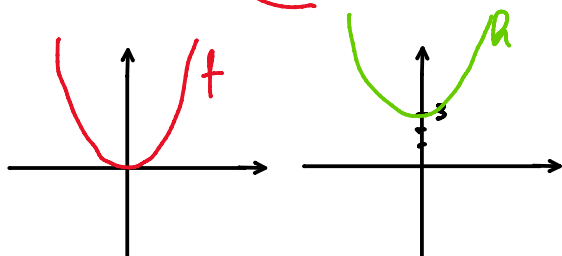
a) Translação horizontal

$$g(x) = f(x+k), k \in \mathbb{R}$$
$$f(x) = x^2 \quad g(x) = (x+2)^2$$



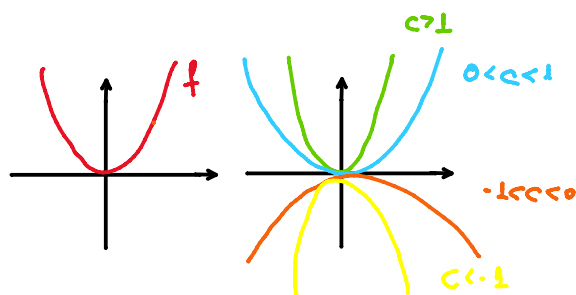
b) Translação vertical

$$h(x) = f(x) + m, m \in \mathbb{R}$$
$$h(x) = x^2 + 3$$



c) Multiplicação por uma constante (não é translação)

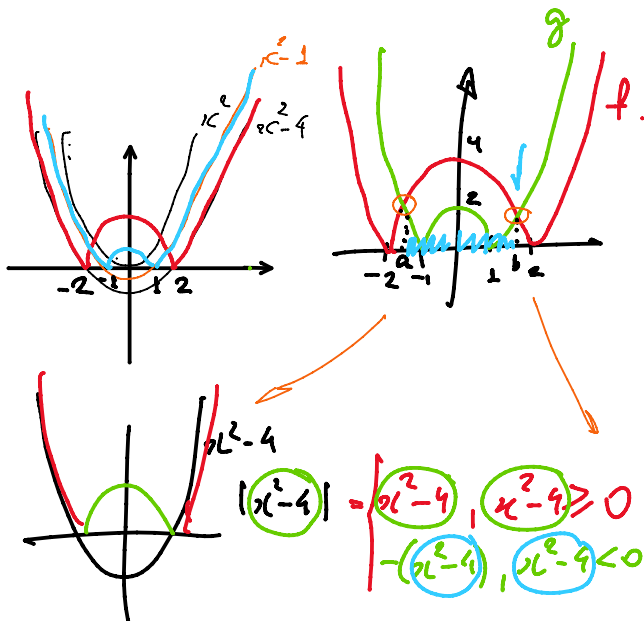
$$j(x) = c f(x)$$



5. Resolva as seguintes inequações:

b. $|x^2 - 4| \geq 2|x^2 - 1|$

$2|x^2 - 1|$



$$\begin{aligned} a=? & \left. \begin{aligned} & 2(x^2 - 1) = -(x^2 - 4) \\ b=? & \end{aligned} \right\} \begin{aligned} & 2x^2 - 2 = -x^2 + 4 \\ & 3x^2 = 6 \\ & x = \pm\sqrt{2} \end{aligned} \end{aligned}$$

$$S = \{x \in \mathbb{R} \mid -\sqrt{2} \leq x \leq \sqrt{2}\}$$