

## EXERCÍCIO 2



Determine o número real positivo cuja soma com o inverso de seu quadrado seja mínima.

$x$   $S$

$$\left(\frac{1}{x^2}\right)' = (x^{-2})' = -2x^{-3} = -\frac{2}{x^3}$$

$$S = x + \frac{1}{x^2}$$

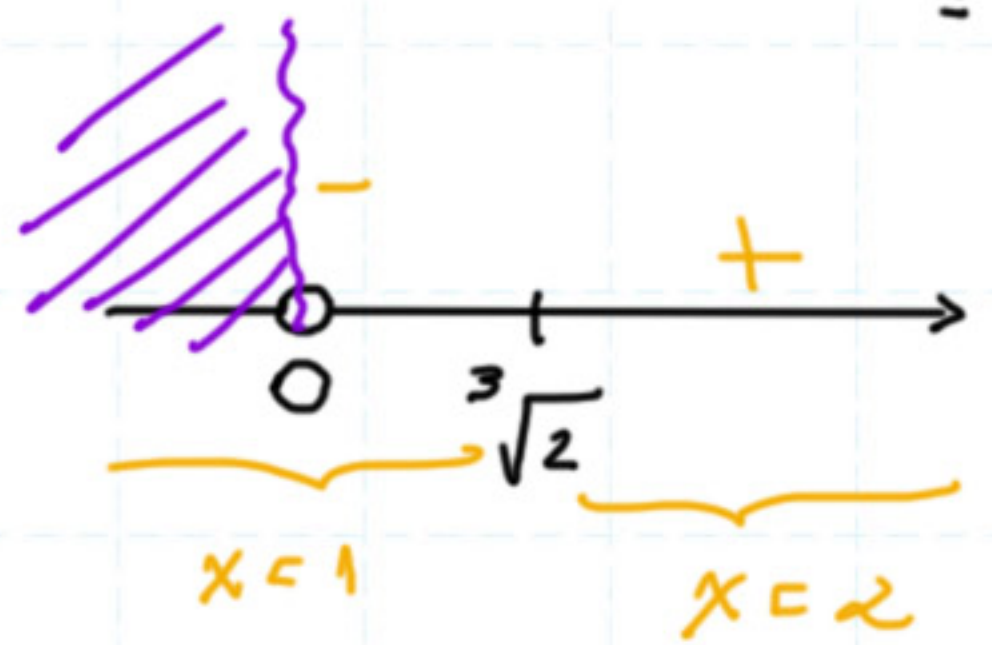
$$S' = 1 + \left(-\frac{2}{x^3}\right)$$

$$1 - \frac{2}{x^3} = 0$$

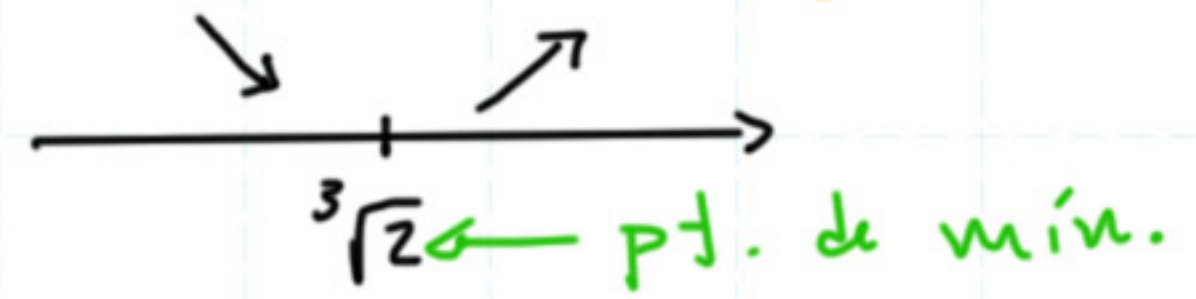
$$1 = \frac{2}{x^3}$$

$$x^3 = 2$$

$$x = \sqrt[3]{2}$$



$$1 - \frac{2}{1^3} = -1 \quad \uparrow$$
$$1 - \frac{2}{2^3} = 1 - \frac{1}{4} = \frac{3}{4} \quad \downarrow$$



Resp.:  $\sqrt[3]{2}$