

EXEMPLO 2



Estudar o crescimento e decrescimento da função $f(x) = 2x^3 - 3x^2 - 12x + 12$.

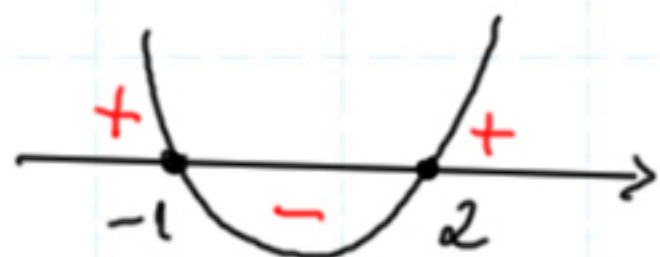
$$f'(x) = 6x^2 - 6x - 12$$

$$6x^2 - 6x - 12 = 0 \quad (\div 6)$$

$$x^2 - x - 2 = 0$$

$$\Delta = (-1)^2 - 4 \cdot 1 \cdot (-2) = 9$$

$$x = \frac{-(-1) \pm \sqrt{9}}{2 \cdot 1} = \frac{1 \pm 3}{2} \rightarrow \begin{matrix} 2 \\ -1 \end{matrix}$$



} estudo do
sinal de f'



} cresc. / dec.
de f

