

$$f := x \mapsto x^3 - 4x^2 - 7x + 10$$

$$f := x \mapsto x^3 - 4 \cdot x^2 - 7 \cdot x + 10 \quad (1)$$

$$\text{expand}(f(x))$$

$$x^3 - 4x^2 - 7x + 10 \quad (2)$$

$$fp := D(f)$$

$$fp := x \mapsto 3 \cdot x^2 - 8 \cdot x - 7 \quad (3)$$

$$\text{solve}(fp(x) = 0)$$

$$\frac{4}{3} + \frac{\sqrt{37}}{3}, \frac{4}{3} - \frac{\sqrt{37}}{3} \quad (4)$$

$$\text{evalf}(\%)$$

$$3.360920843, -0.694254177 \quad (5)$$

$$f(3.360920843)$$

$$-20.74534914 \quad (6)$$

$$f(-0.694254177)$$

$$12.59720101 \quad (7)$$

$$fpp := D(fp)$$

$$fpp := x \mapsto 6 \cdot x - 8 \quad (8)$$

$$\text{solve}(fpp(x) = 0)$$

$$\frac{4}{3} \quad (9)$$

$$f\left(\frac{4}{3}\right)$$

$$-\frac{110}{27} \quad (10)$$

$$\text{evalf}(\%)$$

$$-4.074074074 \quad (11)$$