

$$f := x \rightarrow x^3 - 6 \cdot x^2 + 11 \cdot x - 6$$

$$f := x \mapsto x^3 - 6 \cdot x^2 + 11 \cdot x - 6 \quad (1)$$

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

$$1, 2, 3 \quad (2)$$

$$f := x \rightarrow 4 \cdot \sinh(3 \cdot x) - 5 \cdot \exp(-3 \cdot x)$$

$$f := x \mapsto 4 \cdot \sinh(3 \cdot x) - 5 \cdot e^{-3 \cdot x} \quad (3)$$

$$fp := D(f)$$

$$fp := x \mapsto 12 \cdot \cosh(3 \cdot x) + 15 \cdot e^{-3 \cdot x} \quad (4)$$

$$fpp := D(fp)$$

$$fpp := x \mapsto 36 \cdot \sinh(3 \cdot x) - 45 \cdot e^{-3 \cdot x} \quad (5)$$

$$fpp(x) - 9 \cdot f(x)$$

$$0 \quad (6)$$

Example 5

with(*VectorCalculus*) :

$$\text{Wronskian}([\cos(x)^2, \sin(x)^2, \sec(x)^2, \tan(x)^2], x, 'determinant')$$

$$[[\cos(x)^2, \sin(x)^2, \sec(x)^2, \tan(x)^2], \quad (7)$$

$$[-2 \cos(x) \sin(x), 2 \cos(x) \sin(x), 2 \sec(x)^2 \tan(x), 2 \tan(x) (1 + \tan(x)^2)],$$

$$[2 \sin(x)^2 - 2 \cos(x)^2, -2 \sin(x)^2 + 2 \cos(x)^2, 4 \sec(x)^2 \tan(x)^2 + 2 \sec(x)^2 (1 + \tan(x)^2), 2 (1 + \tan(x)^2)^2 + 4 \tan(x)^2 (1 + \tan(x)^2)],$$

$$[8 \cos(x) \sin(x), -8 \cos(x) \sin(x), 8 \sec(x)^2 \tan(x)^3 + 16 \sec(x)^2 \tan(x) (1 + \tan(x)^2), 16 (1 + \tan(x)^2)^2 \tan(x) + 8 \tan(x)^3 (1 + \tan(x)^2)]], 0$$