

ex11.py > ...

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1  import sympy as sp
2
3  # Definindo a variável simbólica
4  x, a, b, k = sp.symbols('x a b k')
5
6  # 1) Função:  $f(x) = x^3 - 1$ 
7  f1 = x**3 - 1
8  f1_derivative = sp.diff(f1, x)
9
10 # 2) Função:  $f(x) = \log(x^2 - 3k)$ 
11 f2 = sp.log(x**2 - 3*k)
12 f2_derivative = sp.diff(f2, x)
13
14 # 3) Função:  $f(x) = \exp(ax^b)$ 
15 f3 = sp.exp(a * x**b)
16 f3_derivative = sp.diff(f3, x)
17
18 # Exibindo os resultados
19 print(f"1) Derivada de  $f(x) = x^3 - 1$ : {f1_derivative}")
20 print(f"2) Derivada de  $f(x) = \log(x^2 - 3k)$ : {f2_derivative}")
21 print(f"3) Derivada de  $f(x) = \exp(ax^b)$ : {f3_derivative}")
22
```