

1. Evaluate $e^{-3\ln 2}$

2. Find the exact solution of the equation $e^{2+3x} = 9$.

3. Differentiate with respect to x .

a) $y = x^3 \ln(x^2 + 5x - 6)$

b) $y = e^{\sec x^2}$

c) $y = \frac{e^{2x}}{x^2 + 1}$