

1. [2] $f'(x) = 3(2x^2 - e^x)(4x - e^x)$

2. [2] $f'(x) = \frac{3^4(\ln 3x)^2}{x}$

3. [2] (iii) $(3x - 4)^{3e^x} \left[3e^x \left(\frac{3}{3x-4} \right) + \ln(3x - 4)(3e^x) \right]$