1. The position of a particle is given by the equation

\[ s(t) = 2t^3 - 9t^2 + 12t \]

where \( t \) is measured in seconds and \( S \) in meters. Find the total distance traveled by the particle during the first 5 seconds.

2. For \( y(x) = \frac{(x + 1)(x + 10)(x + 8)e^{x^2}}{\sqrt{x + 2}} \), find \( y'(0) \)
3. Find \((f^{-1})'(1)\), given \(f(x) = x^5 + e^x\)

4. \(\lim_{x \to 1} \frac{\sin(x - 1)}{x^2 + 2x - 3} = \)