

Review Quick Hit (1)

1. Compute the following integrals

(a) $\int 2x^{-4} + e^{4x} + 2x^5 dx$

(b) $\int \frac{t+1}{t^2} dt$

(c) $\int (x^{-3} - x)\sqrt{x^2 + x^{-2}} dx$

2. State the Fundamental Theorem of Calculus.

3. Is $y = \ln(x) + e^x + 2018$ a solution to the following differential equation?

$$\frac{d^2y}{dx^2} + \frac{1}{x^2} = \frac{dy}{dx} - \frac{1}{x}$$