

1. Find $\int \left(x^3 - \frac{1}{x^3} \right) dx$

2. Find $\int \sqrt{x} + \frac{2}{\sqrt[3]{x}} dx$

3. If $\int_0^p (x-1)^2 dx = 3$ find p

4. If $\frac{dy}{dx} = (2x + 3)^3$, find y.

5. Find $\int -3\cos 2x dx$

6. Find $\int_{-1}^1 (4x^3 + 3x^2) dx$