

Problem 1

Find $\int_{-1}^1 x^2 \, dx$

Problem 2

Find $\int_1^4 \sqrt{x} + \frac{1}{\sqrt{x}} \, dx$

Problem 3

Find $\frac{d}{dx} \left(\int_{-1}^{\sqrt{x}} \cos(t^3) \, dt \right)$

Problem 4

Find $\int_1^2 \frac{x^2 + \sqrt{x}}{x} \, dx$

Problem 5

Find $\int_{-1}^1 (x^2 + 1)x \, dx$