

Evaluate the following definite integrals.

$$\int_1^3 e^x dx \quad \int_0^\pi \cos x dx \quad \int_{-1}^3 3x^2 + 2x - 1 dx$$

Find $F'(x)$ when $F(x)$ is given by the following integrals:

$$F(x) = \int_1^x e^t dt \quad F(x) = \int_x^3 \cos t^2 dt \quad F(x) = \int_{-1}^{x^2} e^t dt$$

$$F(x) = \int_2^{\sqrt{x^2+1}} \sqrt{t-1} dt \quad F(x) = \int_{-x}^{2x} \sin t dt$$

$$F(x) = \int_{x^2}^{\cos(e^x)} t^2 + \cos(t) dt$$