

Definite Integrals

Compute the integral:

1. $\int_0^8 (8 - 2x) dx$

2. $\int_2^3 6e^{2x} dx$

3. $\int_{-2}^1 (t^4 + 3t^5) dt$

4. $\int_{-3}^2 x^2 \sqrt{x} dx$

5. $\int_0^\pi \cos\left(\frac{1}{3}x\right) dx$