

# Übungen zu linearer Substitution

Berechne die folgenden Integrale!

1.  $\int_0^3 (5x - 1)^3 dx$

2.  $\int_2^4 (-7 - 3x)^5 dx$

3.  $\int_{-1}^3 2 \cdot \left(-x + \frac{2}{3}\right)^6 dx$

4.  $\int_2^3 (ax - b)^7 dx$

5.  $\int_0^2 \sqrt{2x + 8} dx$

6.  $\int_{-4}^1 \sqrt{20 - 4x} dx$

7.  $\int_3^5 \sqrt[3]{5x - 10} dx$

8.  $\int_{-1}^3 \sqrt[4]{12 + 10x} dx$

9.  $\int_{-3}^3 e^{3x+6} dx$

10.  $\int_{-2}^1 (-3) \cdot e^{-0,5x+2} dx$

11.  $\int_1^2 \frac{1}{e^{-2x-8}} dx$

12.  $\int_a^b 4 \cdot e^{kx} dx$

13.  $\int_0^\pi \sin(6x) dx$

14.  $\int_{0,5}^{1,5} -6 \cdot \cos(-4x + 1) dx$

15.  $\int_0^2 \sin(2 \cdot (4x - 3)) dx$

16.  $\int_{-2}^5 \sin(ax^2 + b) da$