

U-Substitution Rule

Section: 5.5

Evaluate the indefinite integrals:

$$\int 4x\sqrt{3-x^2} \, dx$$

$$\int \frac{-\cos(2x)}{\sin^2(2x)} \, dx$$

$$\int \frac{6x^2}{\sqrt{5+2x^3}} \, dx$$

Evaluate the following definite integrals:

$$\int_5^6 3x^5 \sqrt{1+x^2} \, dx$$

$$\int_1^2 \sqrt{3+4x} \, dx$$

$$\int_0^{\frac{\pi}{3}} \cos(2x) e^{\sin(2x)} \, dx$$