

6.8 Evaluating Definite Integrals by Substitution

Example 1

$$a) \int_0^1 \frac{dx}{\sqrt{3x+1}}$$

$$b) \int_{-3\pi/8}^{\pi/8} \cot 2\theta \, d\theta$$

$$c) \int_{\ln 2}^0 x e^{-x^2} dx$$

$$d) \int_{\pi^2}^{4\pi^2} \frac{1}{\sqrt{x}} \sin \sqrt{x} \, dx$$

$$e) \int_1^2 \frac{1}{\sqrt{x}\sqrt{4-x}} dx$$

$$\int_0^{\pi} \sin^8 x \cos^5 x \, dx$$