

换元法

December 5, 2017

第一类换元法

"凑"

例1. (1) $\int \sin(x+1)dx$

(2) $\int \sin(2x)dx$

(3) $\int \frac{dx}{3+2x}$

(4) $\int xe^{-x^2}dx$

(5) $\int \frac{dx}{a^2+x^2}$

$$(6) \int \frac{dx}{\sqrt{a^2 - b^2 x^2}} \quad (a > 0)$$

$$(7) \int \frac{dx}{x^2 - a^2}$$

$$(8) \int \frac{dx}{1 + e^x}$$

$$(9) \int \tan x dx$$

$$(10) \int \cos^2 x dx$$

$$(11) \int \sec^6 x dx$$

$$(12) \int \csc x dx$$

$$(13) \int \sec x dx$$

$$(14) \int \cos 2x \cos 4x dx$$

$$(15) \int \frac{x+1}{x^2+4x-5} dx$$

$$(16) \int \frac{5x^2+6}{x^3-1} dx$$