INTEGREERIMISE PÕHIVALEMID

Integraal	Näide
$\int dx = x + C$	$\int 5\,dx = 5x + C$
$\int x^a\,dx = \dfrac{x^{a+1}}{a+1} + C$, $(a \neq -1)$	$\int x^5\,dx = \dfrac{x^6}{6} + C$
$\int \dfrac{1}{x}\,dx = \ln|x| + C$	$\int \dfrac{5}{x}\,dx = 5\ln|x| + C$
$\int e^x\,dx$	$\int 5e^x\,dx = 5e^x + C$
$\int a^x\,dx = \dfrac{a^x}{\ln a} + C$	$\int 5^x\,dx = \dfrac{5^x}{\ln 5} + C$
$\int \sin x\,dx = -\cos x + C$	$\int 5\sin x\,dx = -5\cos x + C$
$\int \cos x\,dx = \sin x + C$	$\int 5\cos x\,dx = 5\sin x + C$
$\int \dfrac{1}{\cos^2 x}\,dx = \tan x + C$	$\int \dfrac{5}{\cos^2 x}\,dx = 5\tan x + C$
$\int \dfrac{1}{\sin^2 x}\,dx = -\cot x + C$	$\int \dfrac{5}{\sin^2 x}\,dx = -5\cot x + C$
$\int \dfrac{1}{\sqrt{1-x^2}}\,dx = \arcsin x + C = -\arccos x + C$	$\int \dfrac{5}{\sqrt{1-x^2}}\,dx = 5\arcsin x + C = -5\arccos x + C$
$\int \dfrac{1}{1+x^2}\,dx = \arctan x + C = -\operatorname{arccot} x + C$	$\int \dfrac{5}{1+x^2}\,dx = 5\arctan x + C = -5\operatorname{arccot} x + C$

TEHETE INTEGRAALID

1. Arvuga korrutatud funktsiooni integraal $\quad \int c\,f(x)\,dx = c\int f(x)\,dx$

Näide: $\int 5x^2\,dx = 5\int x^2\,dx = 5\cdot\dfrac{x^3}{3} + C = \dfrac{5x^3}{3} + C$

2. Summa integraal $\quad \int [f(x) + g(x)]\,dx = \int f(x)\,dx + \int g(x)\,dx$

Näide: $\int (x+5)\,dx = \int x\,dx + \int 5\,dx = \dfrac{x^2}{2} + 5x + C$

3. Vahe integraal $\quad \int [f(x) - g(x)]\,dx = \int f(x)\,dx - \int g(x)\,dx$

Näide: $\int (x^2 - x) = \int (x^2)\,dx - \int x\,dx = \dfrac{x^3}{3} - \dfrac{x^2}{2} + C$