

Eksempel 1

La oss bestemme det ubestemte integralet $\int 6x^2 - 2\cos(x) dx$:

$\text{int}(6x^2 - 2\cos(x), x)$;

$$2x^3 - 2\sin(x) \quad (1)$$

Eksempel 2

La oss løse differensialligningen $y' = x^3$:

$\text{dsolve}(\text{diff}(y(x), x) = x^3)$;

$$y(x) = \frac{1}{4}x^4 + _CI \quad (2)$$

Eksempel 3

La oss løse initialverdiproblemet $y' = \sin(2x)$, $y\left(\frac{\pi}{2}\right) = 1$:

$\text{dsolve}\left(\left\{\text{diff}(y(x), x) = \sin(2x), y\left(\frac{\text{Pi}}{2}\right) = 1\right\}\right)$;

$$y(x) = -\frac{1}{2}\cos(2x) + \frac{1}{2} \quad (3)$$

Eksempel 4

La oss løse initialverdiproblemet $y'' = 5x^2 - 3x^{-\frac{1}{2}}$, $y'(1) = 2$, $y(1) = 1$:

$\text{dsolve}\left(\left\{\text{diff}(y(x), x\$2) = 5x^2 - 3x^{-\frac{1}{2}}, D(y)(1) = 2, y(1) = 1\right\}\right)$;

$$y(x) = -4x^{3/2} + \frac{5}{12}x^4 + \frac{19}{3}x - \frac{7}{4} \quad (4)$$