

Taking Anti-Derivatives

ex (Indefinite Integrals)

Velocity function is $v(t) = t^2 + 3$,
What is the position function?

$$v(t) = t^2 + 3$$

$$x(t) = \frac{1}{3}t^3 + 3t + C$$

constant of Integration

$$\int t^n \cdot dt = \frac{1}{n+1} \cdot t^{n+1}$$

↑ integral sign
↑ variable of integration
Integrand

ex

$$\int 4 dx = 4x + C$$

$$\int \sin(x) \cdot dx = -\cos(x) + C$$

$$\int \cos(x) dx = \sin(x) + C$$