Eksponentti- ja trigonometristen funktioiden integrointi

E1 $\int e^{4x}\,dx$

$= \frac{1}{4}\int \cancel{4}\cdot e^{4x}\,dx$

$= \frac{1}{4}e^{4x} + C$

$s(x) = 4x$

$s'(x) = 4$

$4 \cdot \frac{1}{4} = 1$

$\int e^{x}\,dx = e^{x} + C$

$D \sin x = \cos x$

$D \cos x = -\sin x$

$\int \sin x \, dx = -\cos x + C$

$\int \cos x \, dx = \sin x + C$

E2 $\int 3 \sin 4x \, dx$

$= 3 \int \sin 4x \, dx$

$= 3 \cdot \frac{1}{4} \int 4 \cdot \sin 4x \, dx$

$= -\frac{3}{4} \cos 4x + C$

$s(x) = 4x$

$s'(x) = 4$