Derivada - Multiplicación

Bit Planet

Solución

$$\frac{d}{dx}\left(x^2\cos(-3x)\right)$$

$u = x^2$

$v = \cos(-3x)$

$Du = 2x^1 = 2x$

$Dv = -\operatorname{sen}(-3x)(-3)$ → * Regla de la cadena

$Dv = 3\operatorname{sen}(-3x)$

* $D(u \cdot v) = Duv \cdot u\,Dv$

$$D\left(x^2\cos(-3x)\right) = 2x\cos(-3x)\cdot x^2\,3\operatorname{sen}(-3x)$$

$$D\left(x^2\cos(-3x)\right) = 3x^2\operatorname{sen}(-3x)\,2x\cos(-3x)$$

* $D(u \cdot v) = Duv \cdot u\,Dv$

* $\frac{d}{dx}x^n = nx^{n-1}$

* $\frac{d}{dx}\cos(x) = -\operatorname{sen}(x)$