

Answer on Question #47039 – Math – Differential Calculus | Equations

Differentiate with respect to x : $y = x^2 \cos x$.

$$\cos^2 x - \sin x$$

$$x(\sin x - \cos x)$$

$$\sin x \cos x$$

$$x(2 \cos x - x \sin x)$$

Solution.

$$y = x^2 \cos x .$$

Use product rule

$$y' = (x^2)' \cos x + (\cos x)' x^2 = 2x \cos x - x^2 \sin x = x(2 \cos x - x \sin x).$$