

47075, Math, Differential Calculus

If $y = 2x^5 \cos x$, differentiate with respect to x .

- a) $x^4(5 \cos x - x \cdot \sin x)$
- b) $2x^4(5 \cos x - \sin x)$
- c) $2x^4(\cos x - x \cdot \sin x)$
- d) $2x^4(5 \cos x - x \cdot \sin x)$

Solution:

$$y' = (2x^5 \cos x)' = 2 \cdot 5 \cdot x^4 \cdot \cos x + 2x^5 \cdot (-\sin x) = 2x^4(5 \cos x - x \cdot \sin x)$$

Answer: d) $2x^4(5 \cos x - x \cdot \sin x)$

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