

Answer on Question #47147 – Math – Differential Calculus | Equations

Differentiate with respect to x : $f(x)=(8x^3+x^2)$

$$8x^3-x$$

$$24x^2-2x$$

$$2x^2-2$$

$$8x^2-x$$

Solution.

$$f(x) = 8x^3 + x^2, \quad f'(x) = 8 * 3 * x^2 + 2 * x = 24x^2 + 2x$$

$$f(x) = 8x^3 - x, \quad f'(x) = 8 * 3 * x^2 - 1 = 24x^2 - 1$$

$$f(x) = 24x^2 - 2x, \quad f'(x) = 24 * 2 * x - 2 = 48x - 2$$

$$f(x) = 2x^2 - 2, \quad f'(x) = 2 * 2 * x = 4x$$

$$f(x) = 8x^2 - x, \quad f'(x) = 8 * 2 * x - 1 = 16x - 1$$

Correct answer is $24x^2 + 2x$.