

Answer on Question #47030 – Math – Differential Calculus | Equations

If $x^4 + 5x^3 - 4x^2 + 7x - 2$, differentiate with respect to x .

$$4x^3 + 15x^2 - 8x - 7$$

$$\mathbf{4x^3 + 15x^2 - 8x + 7}$$

$$4x^3 + 15x^2 - 8x$$

$$2x - 5$$

Solution

$$\frac{d}{dx}(x^4 + 5x^3 - 4x^2 + 7x - 2) = 4 \cdot x^3 + 5 \cdot 3 \cdot x^2 - 4 \cdot 2 \cdot x + 7 = 4x^3 + 15x^2 - 8x + 7$$

We applied differentiation rule for sum, difference of functions and powers.