

Answer on Question #46057, Math, Integral Calculus

Integrate with respect to x :

$$\int_0^1 (2x^2 - 4x - 6) dx$$

a 10/4

b 2/3

c 14/3

d 5/6

Solution

$$\int_0^1 (2x^2 - 4x - 6) dx = \left(\frac{2x^3}{3} - 2x^2 - 6x \right) \Big|_0^1 = \left(\frac{2 \cdot 1^3}{3} - 2 \cdot 1^2 - 6 \cdot 1 \right) - \left(\frac{2 \cdot 0^3}{3} - 2 \cdot 0^2 - 6 \cdot 0 \right) = -\frac{22}{3}$$

Maybe, condition has mistake

Suppose, $\int_0^1 (2x^2 - 4x + 6) dx$, then

$$\int_0^1 (2x^2 - 4x + 6) dx = \left(\frac{2x^3}{3} - 2x^2 + 6x \right) \Big|_0^1 = \left(\frac{2 \cdot 1^3}{3} - 2 \cdot 1^2 + 6 \cdot 1 \right) - \left(\frac{2 \cdot 0^3}{3} - 2 \cdot 0^2 + 6 \cdot 0 \right) = \frac{14}{3}$$