

Answer on Question #50921, Math, Integral Calculus

Task:

Integrate completely with respect to x :

$$\int_0^1 (7 - 4x)^2 dx$$

- a. 79/3
- b. 14/15
- c. 81/70
- d. 16/3

Solution:

$$\int_0^1 (7 - 4x)^2 dx = \int_0^1 (49 - 56x + 16x^2) dx = \left(49x - \frac{56x^2}{2} + \frac{16x^3}{3} \right) \Big|_0^1 = 49 - 28 + \frac{16}{3} = \frac{79}{3}$$

Answer: a. 79/3