

### Answer on Question #50923 – Math – Integral Calculus

Integrate completely with respect to  $x$ :  $\int_1^2 (4x + 6)dx$

- a 12
- b 6
- c 8
- d 16

#### Solution

To solve this problem, apply the Newton-Leibniz formula and integral rules for power functions and addition:

$$\int_1^2 (4x + 6)dx = (2x^2 + 6x)|_1^2 = (2 \cdot 2^2 + 6 \cdot 2) - (2 \cdot 1^2 + 6 \cdot 1) = 20 - 8 = 12$$

**Answer: a. 12.**