

## Answer on Question #50922 – Math – Integral Calculus

Integrate with respect to x :

$$\int_{-2}^2 (x^3 - 3x^2 + 2x - 5) dx$$

- a. -36
- b. 35
- c. 40
- d. 41

### Solution

Apply Newton-Leibniz formula and table integral for the power function:

$$\begin{aligned} \int_{-2}^2 (x^3 - 3x^2 + 2x - 5) dx &= \left( \frac{x^4}{4} - x^3 + x^2 - 5x \right) \Big|_{-2}^2 = \\ &= \left( \frac{16}{4} - 8 + 4 - 10 \right) - \left( \frac{16}{4} + 8 + 4 + 10 \right) = -36 \end{aligned}$$

Thus, the answer is a, that is, -36.

**Answer:** -36.