

PRINT your name _____

Quiz for April 6, 2009 – 9:30 section

Remove everything from your desk except this page and a pencil or pen.

Circle your answer. Show your work. **Check your answer.**

The quiz is worth 5 points.

Find $\int x^2 e^{-2x^3} dx$.

Answer: Let $u = -2x^3$. It follows that $du = -6x^2 dx$ and the problem is

$$(-1/6) \int e^u du = (-1/6)e^u + C = \boxed{(-1/6)e^{-2x^3} + C.}$$

We check our answer. The derivative of $(-1/6)e^{-2x^3}$ is $x^2 e^{-2x^3}$. ✓