

Name: _____

Answer the questions on the worksheet and not on a separate sheet of paper. Please circle your answers and justify your work for full credit.

1. (2 points) Let $y = x^2 \sin(x)$. Determine $\frac{dy}{dx}$.

2. (2 points) Let $y = \sin(x^2)$. Determine $\frac{dy}{dx}$.

3. (2 points) Determine $\int x \sin(x^2) dx$.

4. (2 points) Determine $\int x \sin(x) \, dx$.

5. (2 points) Determine $\int_1^5 \frac{1}{x} \, dx$.