

Math 262-Test#2
Los Angeles City College : Fall 2007

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Name _____

1. Evaluate the integral:

$$\int \cos^6 3x \, dx$$

2. Evaluate the integral:

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

3. Evaluate the integral using trigonometric substitution:

$$\int \frac{2x+3}{\sqrt{x^2+9}} \, dx$$

4. Evaluate the integral:

$$\int 2 \cos^5 2x \sin^3 2x \, dx$$

5. Evaluate the integral:

$$\int \sec^3 x \tan^6 x dx$$

6. Evaluate the integral using partial fraction decomposition

$$\int \frac{3x^2 - 5x + 4}{(x^2 + 4)^2(x + 3)^2} \, dx$$

7. Use the Simpson method to approximate the following integral. Use the error term to find an appropriate value for n for $Error < 0.0001$

$$\int_2^3 \ln(x-1) dx$$

8. Evaluate the following integral:

$$\int_{-\infty}^1 \frac{1-x}{1+x^2} dx$$

9. Evaluate the following integral:

$$\int_{-2}^2 \frac{3}{1-x^2} dx$$