

Practice Exam 2

Name:_____

Make sure to neatly and clearly show all work and mark your answers.

1. Find

$$\int \cos^2(x) \sin(x) dx$$

2. Find

$$\int \cos^2(x) \sin^2(x) dx$$

3. Find

$$\int_0^1 x^2 e^x dx$$

4. Find

$$\int \frac{x^2 - 18}{x^3 - 2x^2 + x} dx$$

5. Find

$$\int_0^8 \sqrt{64 - x^2} dx$$

6. Find

$$\int_1^{\infty} e^{-x} dx$$

7. Suppose that you were driving across the country. Today you drove from 8:00 AM to 8:00 PM, and you checked your speed at 2 hour intervals during the day. The speeds you had are as follows

8:00	10:00	12:00	2:00	4:00	6:00	8:00
35	55	40	60	35	55	60

Use Simpson's rule to approximate how far you traveled during this 12 hour period.