## Calculus II Exam 2, Fall 2002

Find all the integrals. Remember that definite integrals should have numerical answers.

$$1a. \int x \ln(2x) dx$$

1b. 
$$\int \frac{\ln(2x)}{x} dx$$

$$2. \int_{2}^{4} \frac{dx}{x^2 - 1}$$

$$3. \int \tan^2 x dx$$

$$4a. \int e^x (e^{2x} + 1) dx$$

4b. 
$$\int x(e^{2x}+1)dx$$

$$5. \int_{1}^{2} \frac{dx}{x^{2}(x+1)}$$