

Name \_\_\_\_\_

Homework 3  
Section 7.4

Evaluate each of the following integrals. To receive credit, you must actually perform the integration, not simply use a table of integrals. The exception being that you may use the formula for  $\int \sin^2 x \, dx$  or  $\int \cos^2 x \, dx$  given on the handout without justification.

1. (5)  $\int \frac{4x^2 - 5x - 15}{x^3 - 4x^2 - 5x} \, dx$

$$2. (5) \int \frac{1}{(1-t^2)^{3/2}} dt$$

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

$$4. (5) \int \frac{16}{x^3 \sqrt{x^2 - 4}} dx$$