

Name _____

Homework 4
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) $\int \frac{4x^2 - 5x - 15}{x^3 - 4x^2 - 5x} \, dx$ Write your answer as $\ln(f(x)) + C$ for some function $f(x)$.

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

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

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