

Homework #3 (Continued)

Math 2300 - Section 880

Due: Thursday, Sep 10

Instructions. Be sure to show your work and explain your reasoning for full credit. Be aware that this homework assignment also has problems from the textbook (as indicated on the course website).

NAME _____

1. Solve the integrals:

(a) $\int \frac{1}{\sqrt{x^2+4}} dx,$

(b) $\int \frac{dx}{x^2\sqrt{25-x^2}},$

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

2. Check your answer to $\int \frac{1}{\sqrt{x^2+9}} dx$ on Wolfram Alpha. Confirm that the two answers are equivalent.
3. Integrate $\int x^2(2+x^3)^4 dx$ using the simplest method possible. Compare your answer to the result you get on Wolfram Alpha. Explain why the two answers are equivalent.