

NAME:

APPM 1360.300—Quiz 2: Techniques of Integration—06/18/09

Clearly print your name above. Show all work to receive full credit. Justify all answers!

1. (5 points) Evaluate  $\int_0^{\pi/4} \sqrt{1 - \cos(6x)} dx$

2. (5 points) Evaluate  $\int_1^e x^3 \ln(x) dx$

3. (5 points) Evaluate  $\int_1^5 \frac{dx}{x^2 - 6x + 13}$

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

Extra Credit: Show  $\int \sec u du = \ln |\sec u + \tan u| + C$