

NAME: _____

THIS TEST SCORE: _____

ACTIVITY POINTS: _____

CURRENT TOTAL/GRADE: _____

MATH 1960 section 004: Midterm #1

Friday, March 05, 2010.

You may get up to 100 points for this test (25 points for each problem). Your answers/solutions should be written clearly and legibly. The presentation of your solutions/answers to problems marked with a "*" will be worth up to 50% of the total amount of points available for that problem.

PROBLEM 1 Evaluate the following integrals. (Just give your answers)

(a) $\int_1^{\infty} \frac{dx}{x^{1.001}} = \underline{1000}$

(b) $\int_0^4 \frac{dx}{\sqrt{4-x}} = \underline{4}$

(c) $\int z(\ln(z))^2 dz = \underline{\frac{1}{2} z^2 \ln(z)^2 - \frac{1}{2} z^2 \ln(z) + \frac{1}{4} z^2 + C}$

(d) $\int_0^{\pi} \sin(2x) \cos^2(2x) dx = \underline{0}$

(e) $\int e^{-y} \cos(y) dy = \underline{\frac{1}{2} e^{-y} \sin(y) - \frac{1}{2} e^{-y} \cos(y) + C}$

(f) $\int_0^2 \frac{s+1}{\sqrt{4-s^2}} ds = \underline{\frac{\pi}{2} + 2}$

(g) $\int \sin(\ln(z)) dz = \underline{-\frac{1}{2} z \cos(\ln(z)) + \frac{1}{2} z \sin(\ln(z)) + C}$

(h) $\int \frac{x^2 dx}{(x^2-1)^{5/2}} = \underline{\frac{-x^3}{3(x^2-1)^{3/2}} + C}$