

NAME _____ QUIZ I Due: Friday, Oct. 2
please print clearly MATH 173 25 points

Open book, open notes, but you must do your own work. In particular, no “internet” help.
To receive credit, show all appropriate work.
Neatness, clarity and quality of work will be worth an unspecified number of points.
Please use pencil, otherwise this quiz will not be graded.

(2) 1. a) Geometrically, the definite integral $\int_a^b f(x)dx$ is the:

b) Analytically, the definite integral $\int_a^b f(x)dx$ is the:

(10) 2. For each of the definite integrals given below, graph its integrand and then use geometry to find its value.

a) $\int_0^3 2|x-2| + 2x \, dx$

b) $\int_0^6 \sqrt{36-x^2} \, dx$

(1) 3. Suppose that $A(x) = \int_1^x \cos(1/t) dt$, $x > 0$.

Then $A'(x) =$

(12) 4. Use FTC II to find and *simplify* the values of the following definite integrals.

a) $\int_0^2 4x^3 + 6x^2 - 20 dx$

b) $\int_1^8 4\sqrt[3]{x} dx$

c) $\int_0^{3\pi} \cos(3t) - \sin(t/3) dt$

Extra Credit (4 points) At what university and in what year did your Math 173 professor earn his Ph.D.? Same question for his wife.