Math 19A March 6, 2000

Calculus for Science, Engineering, and Mathematics Winter 2000, UCSC

## QUIZ 8

- 1. Suppose that we have a cube whose sides are 10.
- (a) Find the exact amount of paint needed to put a layer of thickness 0.1 on the surface of the cube.
- (b) Use differentials to approximate the amount of paint.
- (c) Show that the approximation you get by using the differentials is equal to the surface area multiplied by the thickness.

The first two parts are worth 4 points each, and the last part is 2 points.

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