10 am

Quiz 5

Spring 2012 **Your name:** _____

Math 0220 **Your TA's name:** _____

No calculators. Show all your work (no work = no credit). Write neatly.

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1. (15 points) Evaluate the integrals.

   (a) (8 points) $\displaystyle\int_0^4 \sqrt{16 - x^2}\, dx$

   (b) (7 points) $\displaystyle\int_{-1}^{2} \left(4x^3 + \frac{2}{x^3}\right) dx$

test problem 1 [10 points] Find the absolute maximum and absolute minimum values of the function $f(x) = x^3 - 12x + 2$ on the interval $[-3, 5]$.

test problem 2 [10 points] The diameter of a circular disk is given as 50 cm with a maximum error in measurement of 0.2 cm. Use **differentials** to estimate the maximum error in the calculated area of the disk.