1pm

Quiz 3

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. [5 points] Find the limit, probably infinite, if it exists. If the limit does not exist explain why. Support your answer.

$$\lim_{x \to -5^+} e^{4/(x+5)}$$

2. [5 points] The radius of a circular disk is given as 40 cm with a maximum error in measurement of 0.1 cm. Use differentials to estimate the maximum error in the calculated area of the disk.

3. [5 points] A light is on the top of a 15 ft tall pole and a 6 ft tall person is walking away from the pole at a rate of 2 ft/sec. At what rate is the tip of the shadow moving away from the person when the person is 25 ft from the pole?

test problem [8 points] Use implicit differentiation to find an equation of the tangent line to the curve $2x^{2/3} + y^{2/3} = 6$ at the point $(1, 8)$.