Weekly Quiz 8 - Thursday, November 2, 2006

1. (10 points) Evaluate the following integral. (Hint: Convert to Spherical coordinates.)

\[ \int_{-1}^{1} \int_{-\sqrt{1-x^2}}^{\sqrt{1-x^2}} \int_{-\sqrt{1-x^2-y^2}}^{\sqrt{1-x^2-y^2}} \frac{1}{\sqrt{x^2 + y^2 + z^2}} \, dz \, dy \, dx \]

Bonus: Third of a 4 part series on mammals:
Name a mammal of the Australian Outback (NOT Kangaroo!).