

King Fahd University of Petroleum and Minerals  
Department of Mathematics and Statistics  
Math 201 – Term 182 – Quiz 6

Name:

Student ID #:

Section #: 13

**Question 1.** Write  $\int_0^2 \int_0^{\sqrt{4-x^2}} \int_{\sqrt{x^2+y^2}}^2 \sqrt{x^2+y^2} dz dy dx$  in terms of cylindrical coordinates.

**SEE BACK OF THE PAGE FOR QUESTION 2**

**Question 2.** Use spherical coordinates to find the volume of the solid that lies above the cone  $z = \sqrt{x^2 + y^2}$  and below the sphere  $x^2 + y^2 + z^2 = 2z$ .