King Fahd University of Petroleum and Minerals

MATH 201 QUIZ#5 Term 152 *Dr. A. Khalfallah*

Name:	Section:	ID:

Q1 Change the Cartesian integral into an equivalent polar integral. Then evaluate the polar integral

$$\int_{-1}^{0}\int_{-\sqrt{1-x^2}}^{0} \frac{1}{1+\sqrt{x^2+y^2}}\, d\,y\, dx$$

Q2 Find the volume, in the first octant, of the solid inside both the hemisphere $z = \sqrt{16 - x^2 - y^2}$ and the cylinder $x^2 + y^2 - 4x = 0$.