Quiz #10; Wed, 4/6/2016

Math 53 with Prof. Stankova

Section 107; MWF10-11

GSI: Christopher Eur

Student Name: _____

Problem. Use the double integral in polar coordinates to show that the volume of a cylinder with radius r and height h is $\pi r^2 h$.

Solution.

$$\int_0^r \int_0^{2\pi} hr \; d\theta dr = h(2\pi)\left(\frac{1}{2}r^2\right) = \pi r^2 h$$