

**Quiz 10**; Wednesday, April 6  
**MATH 53** with Professor Stankova  
**Section 109**; 11-12  
**GSI**: Eric Hallman

**Student name:**

You have 10 minutes to complete the quiz. Calculators are not permitted, and remember to show your calculations and explain your reasoning in order to receive full credit.

1. Use a double integral in polar coordinates to find the volume of a sphere with radius  $a$ .