

Full name: _____ GT ID: _____ Sec: _____

Quiz 8 Version A

You have 15 minutes to take the quiz. No phones, notes, or use aids of any kind is permitted.

1. (4 points) **[Cylindrical and Spherical Coordinates]** *Fill in the blanks.* [AN]

(a) Find the spherical coordinates of the point $(x, y, z) = (0, 3\sqrt{2}, 3\sqrt{2})$.

(b) State the volume differential dV for spherical coordinates.

 $dV =$

2. (6 points) **[Triple Integrals in Rectangular Coordinates]**

Set up and evaluate a triple iterated integral in cartesian (rectangular) coordinates which computes the volume of the region D . The region D is the tetrahedron in the first octant bounded by the coordinate planes and the plane $x + y + z = 3$.

Hint: $dV = dz \, dy \, dx$.

[AJN]