

KFUPM – Calculus III – Quiz 7 – Fall 2011

ID Number:

SECTION:

(3 pts) **Problem 1:** Convert the equation $x^2 + y^2 + z^2 = x$ from rectangular to cylindrical and spherical coordinates.

(3 pts) **Problem 2:** Write down a triple integral that gives the volume of the solid cone bounded from above by $z = 2$ and from below by $z = \sqrt{x^2 + y^2}$. Do NOT solve the integral.

(4 pts) **Problem 3:** Compute the area inside the intersection of the circles $x^2 + y^2 = x$ and $x^2 + y^2 = 3y$.