

Name: _____ **MATH 210 Quiz 9 (Nov 11, 2005)** no calculators!

(1) Let E be the solid bounded by the paraboloid $z = 3x^2 + 3y^2$ and the plane $z = 3$. Compute the volume of E .

(2) Let E be the solid bounded by the coordinate planes $x = 0$, $y = 0$, $z = 0$, and the plane $x + 2y + 3z = 6$.

Write down the triple integral $\iiint_E f(x, y, z) dV$ as the iterate integral in three different ways. The orders of integration are given below, you have to fill in the limits of integration for each variable in each integral.

$\int_{\square} \int_{\square} \int_{\square} f(x, y, z) dz dy dx$	$\int_{\square} \int_{\square} \int_{\square} f(x, y, z) dy dz dx$
$\square \quad \square \quad \square$	$\square \quad \square \quad \square$

$\int_{\square} \int_{\square} \int_{\square} f(x, y, z) dx dz dy$
$\square \quad \square \quad \square$