

## EXAM 2(SAMPLE)

**Problem 1.** Evaluate the double integral  $\iint_D x^2 dA$ , where  $D$  is the region bounded by lines  $y = 0, x = 1, y = x$ .

**Problem 2.** Find the area of the plane  $x + y + z = 1000$  above the disk  $x^2 + y^2 \leq 1$ .

**Problem 3.** Find the volume of the solid which is located above the  $xy$ -plane and bounded by the cylinder  $x^2 + y^2 \leq 1$  and cone  $z^2 = x^2 + y^2$ .

**Problem 4.** Evaluate the triple integral  $\iiint_E \sqrt{(x^2 + y^2 + z^2)} dV$  where  $E$  is the ball  $x^2 + y^2 + z^2 \leq 9$ .