

1. Find the volume of the region bounded above by the surface  $z = 100 - 6x^2y$  and bounded below by the rectangle  $[0, 2] \times [-1, 1]$ .

2. For the integral  $\int_0^1 \int_x^1 f(x, y) dy dx$  sketch the region of integration and then write an equivalent iterated integral with order of integration reversed.