Math 201-13 Quiz #3

Exercise 1 *Evaluate the double integral I over the region D*

$$I = \int\int (y^2 + 2x^2 y)dA \qquad , \qquad D = \{(x, y) : 0 \leq x \leq 2, 0 \leq y \leq 1\}$$

Exercise 2 *Set up an integral (do not evaluate it!) for the volume of the solid whose base is the region in the xy-plane that is bounded by the parabola $y = 2 - x^2$ and the line $y = x$, while the top of the solid is bounded by the surface $z = 14 - x^2 - y^2$, and sketch the base of the solid.*