(7 points) 1. Evaluate the double integral by first identifying it as the volume of a solid.

\[ \int_{R} (6 - x) \, dA, \ R = \{(x, y)\| 0 \leq x \leq 6, 0 \leq y \leq 5\} \]

(8 points) Calculate the iterated integral.

\[ \int_{0}^{1} \int_{0}^{1} xy \sqrt{x^2 + y^2} \, dx \, dy \]