1. Page 300 : # 4, 6(a).


3. Find the volume of the solid in the first octant which is bounded by the graph of the plane $z = a - x - y$ ($a > 0$) and the coordinate planes.

4. Page 326 : # 1(a), 2(c), 5.

5. Compute the integral $\int_0^2 \int_{y^2}^4 y \sqrt{1 + x^2} \, dx \, dy$.

6. Show that for fixed $t$, $\int_0^t \int_0^y F(x) \, dx \, dy = \int_0^t (t - x) F(x) \, dx$.

7. $\int_0^1 \int_0^x \int_0^y 6(y + xz) \, dz \, dy \, dx = ?$

8. Fill in the boxes:

$$\int_{-3}^3 \int_0^{\sqrt{9-x^2}} \int_0^{\sqrt{9-y^2}} (xy + 2z) \, dz \, dy \, dx = \int \int \int dy \, dx \, dz.$$