Each problem is worth zero points... this time.

1. Set up an iterated integral for the volume of the region beneath the surface \( z = 9 - x^2 - y^2 \) and above the rectangle in the \( xy \)-plane with vertices at the origin, (2,0), (2,1), and (0,1).

\[
\int_{0}^{2} \int_{0}^{1} (9 - x^2 - y^2) \, dx \, dy
\]

2. Set up an iterated integral for the volume of the region beneath the surface \( z = 9 - x^2 - y^2 \) and above the triangle in the \( xy \)-plane with vertices at the origin, (2,0), and (0,1).

\[
\int_{x=2}^{y=1-\frac{1}{2}x} \int_{y=0}^{9-x^2-y^2} (9 - x^2 - y^2) \, dy \, dx
\]

3. Set up an iterated integral for the volume of the first-octant portion of a sphere with radius 5.

\[
\int_{0}^{5} \int_{0}^{\sqrt{25-x^2}} \int_{0}^{\sqrt{25-x^2-y^2}} 1 \, dz \, dy \, dx
\]

4. Set up an iterated integral for the volume of the region bounded by the surface \( z = 4 - x^2 \), the \( xy \)-plane, the \( xz \)-plane, and the plane \( x + y = 4 \).

\[
\int_{-2}^{2} \int_{0}^{4-x^2} \int_{0}^{4-x^2} 1 \, dz \, dy \, dx
\]

5. Set up an iterated integral for the volume of the region bounded below by the surface \( z = x^2 \) and above by the surface \( z = 9 - y^2 \).

\[
\int_{-3}^{3} \int_{-\sqrt{9-x^2}}^{\sqrt{9-x^2}} \int_{x^2}^{9-y^2} 1 \, dz \, dy \, dx
\]

6. Set up an iterated integral for the volume of the region bounded by the hyperboloid of two sheets \( z^2 - x^2 - y^2 = 1 \) and the plane \( z = 2 \).

\[
\int_{-\sqrt{5}}^{\sqrt{5}} \int_{-2\sqrt{2}}^{2\sqrt{2}} \int_{2}^{\sqrt{5-x^2}} 1 \, dz \, dy \, dx
\]