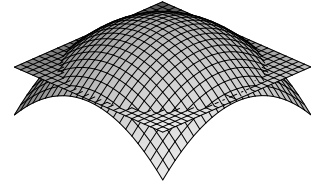
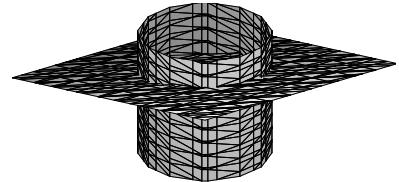


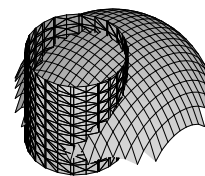
1. Find the volume of the solid bounded above by $z = 25 - x^2 - y^2$ and below by the xy -plane.



2. Find the volume of the solid that lies below $z = 10 + 2x + 3y$ and above the region in the xy -plane bounded by the polar curve $r = \sin(\theta)$.



3. Find the volume of the solid that lies under the upper hemisphere $z = \sqrt{25 - x^2 - y^2}$, above the xy -plane, and inside the cylinder $x^2 + y^2 = 5x$.



4. Evaluate $\int \int_R ye^x dA$ where R is the region in the first quadrant enclosed by the circle $x^2 + y^2 = 25$.