1. Evaluate

\[ \iint_S \langle x, y, z^2 \rangle \cdot d\mathbf{S} \]

where \( S \) is the cone parameterized by

\[ G(u, v) = \langle 2u \cos v, 2u \sin v, u \rangle \]

for \( 0 \leq u \leq 2, 0 \leq v \leq 2\pi \) with outward/downward pointing normal vectors.
2. Evaluate

$$\iint_S \langle xz, yz, x^2 + y^2 \rangle \cdot dS$$

where $S$ is the surface consisting of the cylinder $x^2 + y^2 = 4$ for $0 \leq z \leq 3$ with outward pointing normal and the disk $x^2 + y^2 \leq 4$ in the $xy$-plane with downward normal. [$S$ is a drinking glass, with normal vectors pointing outward.]