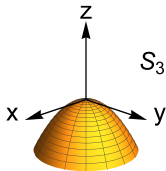
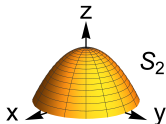
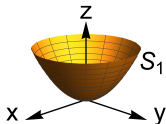


Surface Integrals



Question

The figures show 3 congruent paraboloids S_i in space. If $f(x, y, z)$ computes the distance from (x, y, z) to the z -axis, rank the surface integrals $I_j = \iint_{S_i} f(x, y, z) dS$.



A. $I_1 = I_2 = I_3$

B. $I_3 < I_2 < I_1$

C. $I_3 < I_1 < I_2$

D. $I_3 < I_1 = I_2$