Group members (1 to 3): ________________________________________________

(1) Find the center of mass of a hemispherical shell with outer radius \( R_2 \) and inner radius \( R_1 \), centered at the origin (i.e. this shell is bounded by \( z \geq 0, \ x^2 + y^2 + z^2 \leq R_2^2 \), and \( x^2 + y^2 + z^2 \geq R_1^2 \)).

(2) What are the \( z \)-coordinates of the center of mass for the extreme cases where
(A) \( R_1 = 0 \)
(B) the limit as \( R_1 \to R_2 \)?