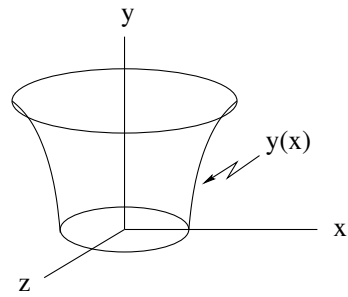## [mex27] Economy plastic cup

A manufacturer of plastic cups receives an order for cups of given height, diameters at the top and bottom, and material thickness. Determine the profile $y(x)$ at $z = 0$ of the cup which minimizes the amount of plastic needed for each cup.

Solution: