TOBB EKONOMİ VE TEKNOLOJİ ÜNİVERSİTESİ

MAK 206 Strength of Materials – 2016-2017 Spring

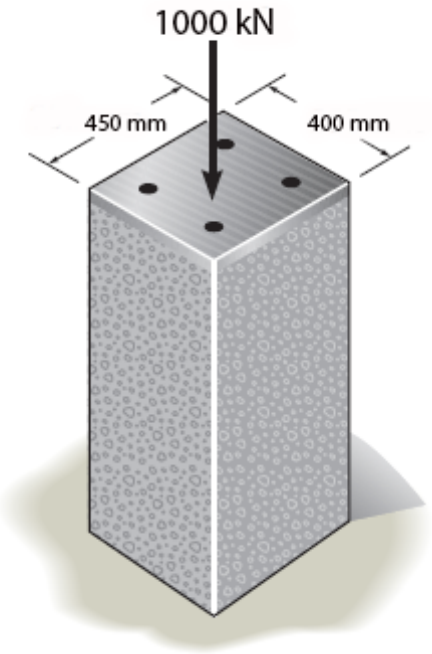
QUIZ 3

10/02/2017 Ad-Soyad :_____

Prof.Dr. M.Ali Güler No :_____

!!!!!!!!!!!!! 10 Minutes !!!!!!!!!!!!!!

The column is constructed from high-strength concrete and four A-36 steel reinforcing rods. If it is subjected to an axial force of 1000 kN, determine the required diameter of each rod so that two-fifth of the load is carried by the concrete and three-fifth by the steel.



Does the result really make sense? Why? (Bonus +2 points)

$E_{st} = 240$ GPa & $E_c = 30$ GPa