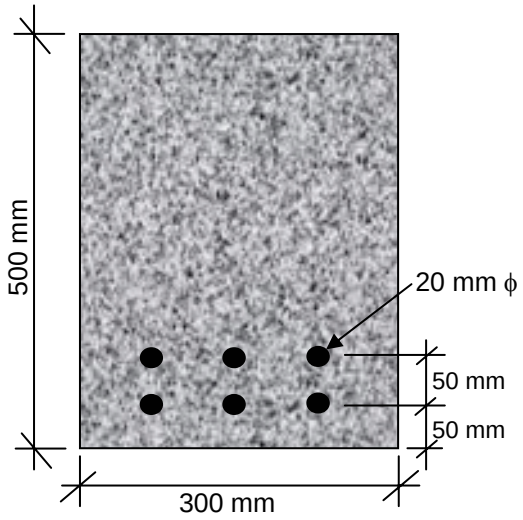
Dr. Eray Baran

Student Name:_____
Student ID:_____

CE-204 Mechanics of Materials
2007-2008 Spring Semester
Homework #3
Due: April 15th



If the reinforced concrete beam shown is subjected to a positive bending moment of 200 kN-m, determine:

i) the stress in steel bars
ii) the maximum stress in concrete
iii) the total compressive force in concrete
iv) the total tensile force in each layer of steel bars.

$E_{concrete}$ = 25 Gpa
E_{steel} = 200 GPa