Name _____ **Section** _____

ES204
Examination II
January 18, 2002

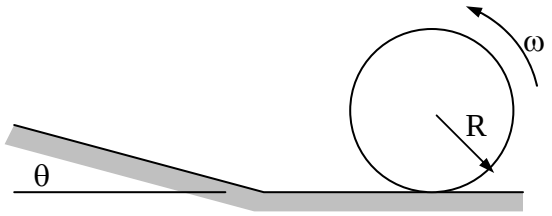
Problem	Score
1	/30
2	/30
3	/40
Total	/100

Show all work for credit
AND
Turn in your signed help sheet
AND
Stay in your seat until the end of class

Name _____ 30 pts

ES204 Examination II **Problem 1** Jan. 18, 2002

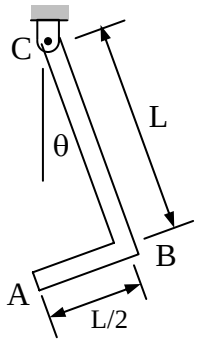
A homogeneous cylindrical disk of mass m rolls without slipping on the horizontal surface with angular velocity ω. If it does not slip or leave the slanted surface when it comes into contact with it, what is the angular velocity ω' of the disk immediately after contact.



Name _____ 30 pts

ES204 Examination II **Problem 2** Jan. 18, 2002

The object shown below consists of two slender bars welded together at point B. The length of bar AB is L and the length of bar BC is L/2. Bar AB has a mass of m_{AB} and bar BC has a mass of m_{BC}. Determine the reactions at point C at $\theta = 0$ if at this instant the angular velocity of the object is 20 rad/s.



Name _____ 40 pts

ES204 Examination II **Problem 3** Jan. 18, 2002