PRINT NAME and NET ID_____

Signature_____

GEN_ENG_205-2_Sec24

Engineering Analysis II

Mock Exam 2: 2:00 – 2:50pm

Wednesday February 21, 2024

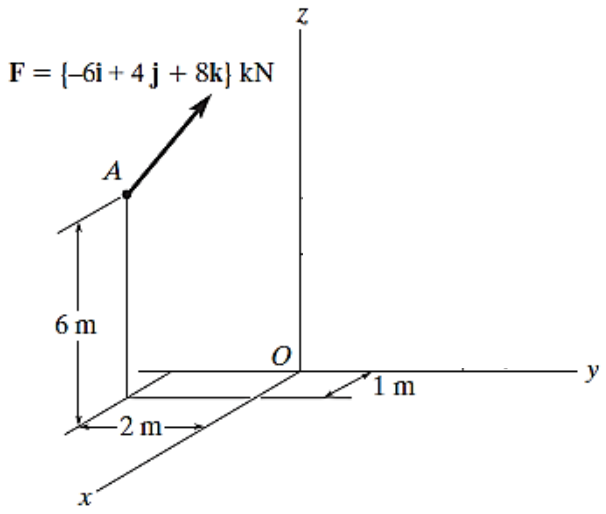
S. Gomaa

Instructions.

- Closed book and notes.
- Turn off all electronic devices and put away all items except a pen/pencil, eraser and a calculator.
- Remove hats and sunglasses
- Show sufficient work to justify your answer.
- While the test is in progress we will not answer questions concerning the test material.
- Do not leave early unless you are at the end of a row.
- Quit working and close the test when we say STOP.
- Quickly turn in your test to me or a TA. If a test leaves the room it will not be graded.

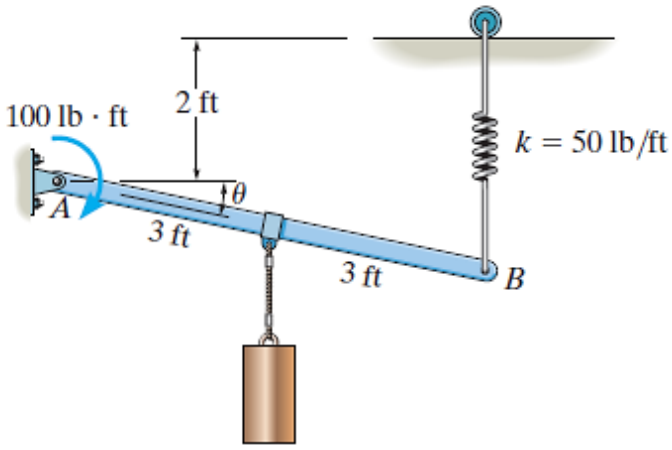
Problem 1 (10 points)

Determine the moment of the force **F** about point *O*. Express the result as a cartesian vector.



Problem 2 (10 points)

The rod supports a weight of 200 lb and is pinned at its end *A*. If it is also subjected to a couple moment of 100 lb.ft, determine the angle θ for equilibrium. The spring has an unstretched length of 2 ft and a stiffness of k = 50 lb/ft.



Problem 3 (10 points)

Determine the force in members *ED* and *EB* of the truss. State if the members are in tension or compression.