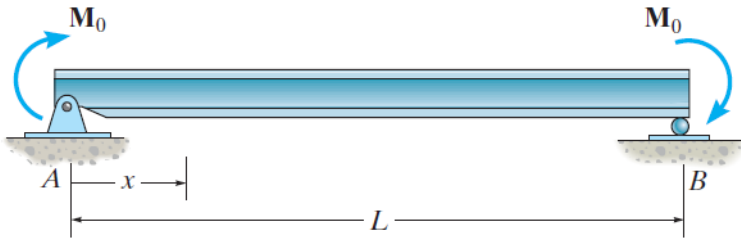CME 260 – Mechanics of Materials
Exam #8 (04/13/2022)

Tech ID or Star ID: _____

Do one of the two problems shown below (the second problem is on the back).
Show your work (you will not receive any credit if all you have is a final answer, right or wrong).

(1) Determine the equation of the elastic curve for the beam using the x coordinate. What is the slope at A and the deflection at the center of the beam? EI is constant.

(2) Determine the equations of the elastic curve for the shaft using the $x_1$ and $x_2$ coordinates. What is the slope at A and the deflection at C? EI is constant. The supports at A and B prevent translation of the shaft in the vertical direction but rotation can occur.