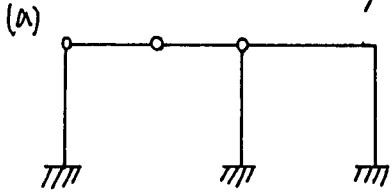
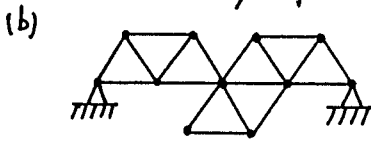


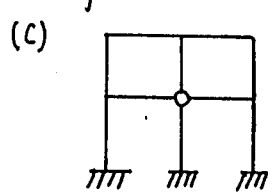
1. Discuss the stability and determinacy of the following structures.



frame

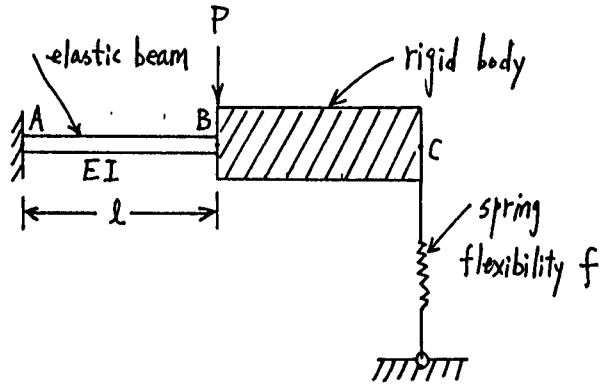


truss

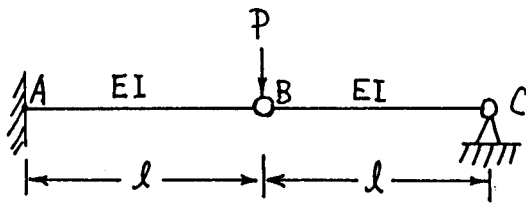


frame

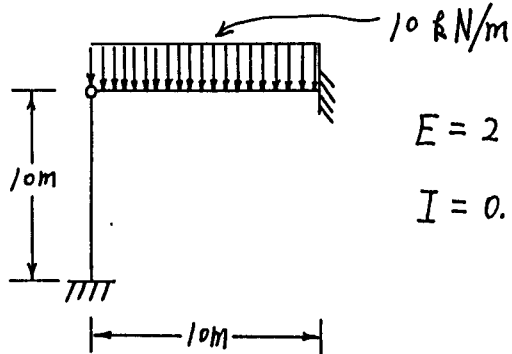
2. Find the rotation angle at B.



3. Construct the stiffness equation using the matrix displacement method.



4. Draw the shear force and bending moment diagrams.



$$E = 2 \text{ kN/m}^2$$

$$I = 0.001 \text{ m}^4$$