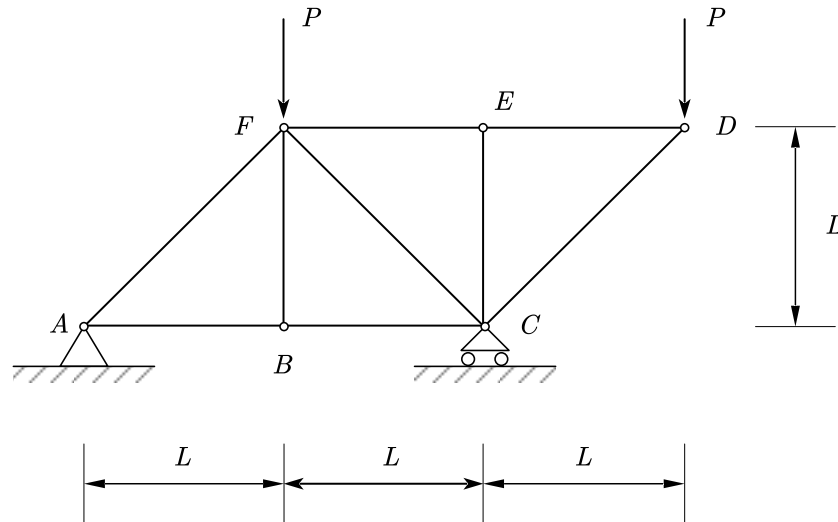


Homework #5

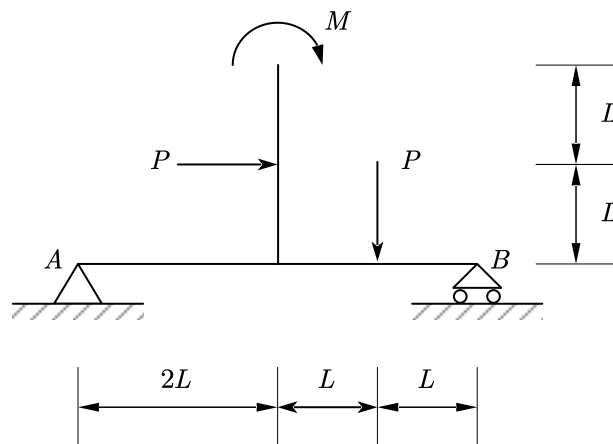
Problem 1: Considering the truss structure shown below:



A vertical load of P kN is applied at nodes D and F . AE is constant for all truss members.

- (1) Use the method of virtual forces to show that the horizontal displacement at node D
- (2) Use the method of virtual forces to show that the vertical displacement at node D

Problem 2: Consider the T-shaped structure shown below:



- (1) Use static analysis method to calculate the vertical reactions at support A and B .
- (2) Use the method of virtual displacements to calculate the vertical reactions at support A and B .