

Example 3.2.1 - Figure 1 shows the truss analysed in the Structures Lab, but now with the redundant member 6 attached. The joints have been named A , B , C , D and F as shown. Consider a generic load Q applied vertically at joint F . All members have the same Young's modulus E and cross-sectional area A . Taking the force in member 6 as the unknown X , find the expression for X as a function of the force Q using the PSPE.

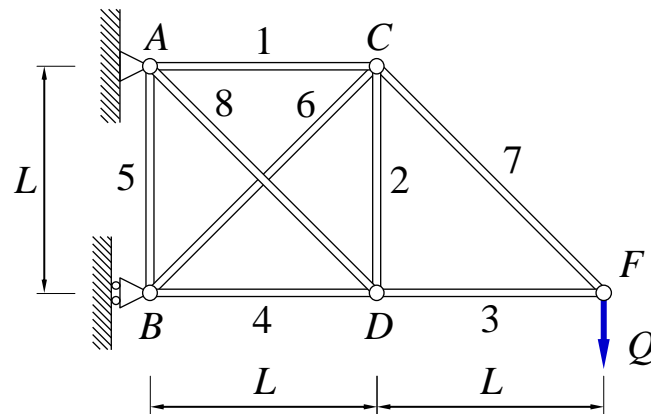


Figure 1: A plane pin-jointed truss structure.