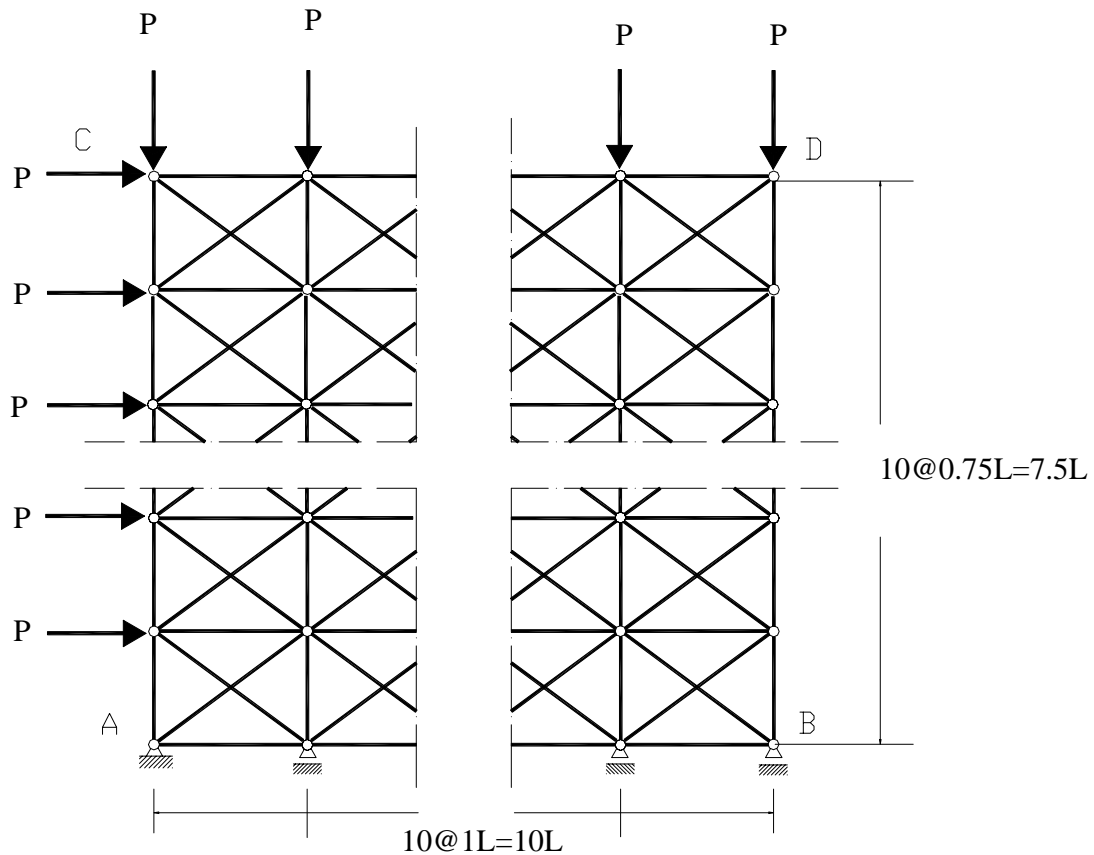


Ten-bay ten-floor truss



Dimension: every bay is $1L$, every floor is $0.75L$

The dimension of the structure: $10L \times 7.5L$ (121 nodes, 420 elements)

Load: Ten horizontal loads at left nodes, P ; eleven vertical loads at top nodes, P .

Cross sectional area: A

Boundary condition: support A is a pin; all other supports at bottom are rollers.

Interval parameter:

Uncertainty: 1% uncertainty in modulus of elasticity means $\mathbf{E} = [0.995, 1.005]E$

Looking for the normalized displacement at corner **D**: (that is, $\frac{U_D EA}{PL}$)

Deterministic (midpoint) solution:

$$U_X = 22.1471$$

$$U_Y = -10.2585$$