# 공력탄성학 과제물 1번
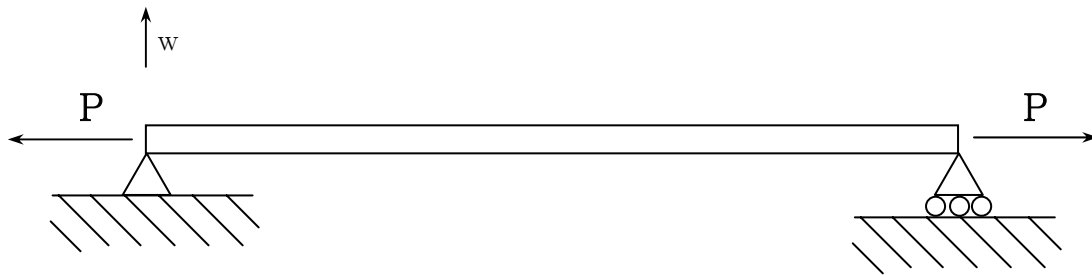
1. Find an analytical solution for the natural mode shapes (continuous) and frequencies of the simply supported uniform beam with end loads P as shown below.



Length = L, Flexural stiffness = EI (const.),
Mass/length = m (const.), Area = A (const.)

2. Show (plot) how the first three natural frequencies change as a function of the applied preload P (the pre-tension/compression in the beam).