

Problem M4

The spar in a wing is modeled as a 10 m long beam. The combination of lift and self-weight is modeled as resulting in a load distribution varying linearly from 5kN/m at the root to zero at the tip. The beam has a rectangular cross section, height, h , of 100 mm and breadth, b , of 50 mm. Calculate the maximum bending stress in the beam, stating its location(s) and calculate the deflection of the tip of the beam

