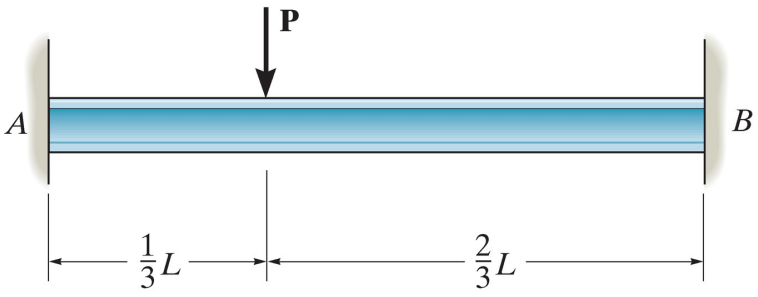
Name:

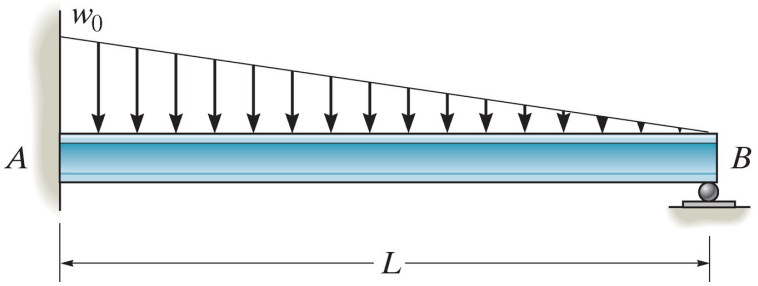
Homework 10

Not for credit

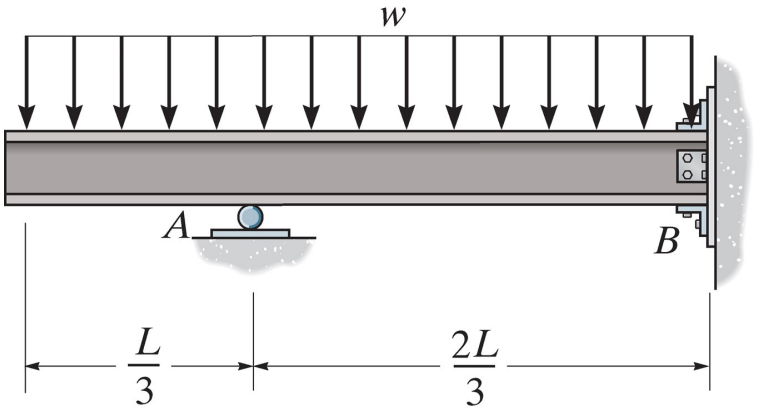
1. Find the reactions at each support, assume EI is constant and neglect axial load.



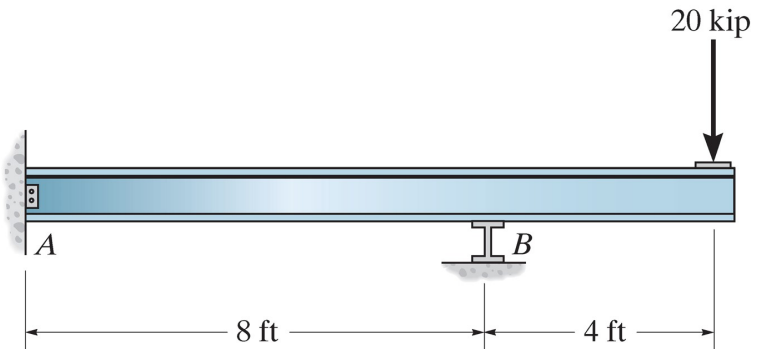
2. Find the maximum deflection in terms of some constant EI



3. Find the maximum deflection in terms of some constant EI



4. Find the reactions at each of the supports, assuming A is a fixed support and B is a roller.



5. Dr. Smith has decided to add an extra support at the center of his daughter's bed he is building. Compare the maximum deflection with and without the support assuming that the piece in question can be modeled as shown below. Note that the beam is 6 feet long with a support added exactly in the middle and his daughter weighs 30 pounds, neglect any horizontal reaction forces. Assume the beam is a solid rectangle made from pine 1.5 inches thick and 3 inches tall.