

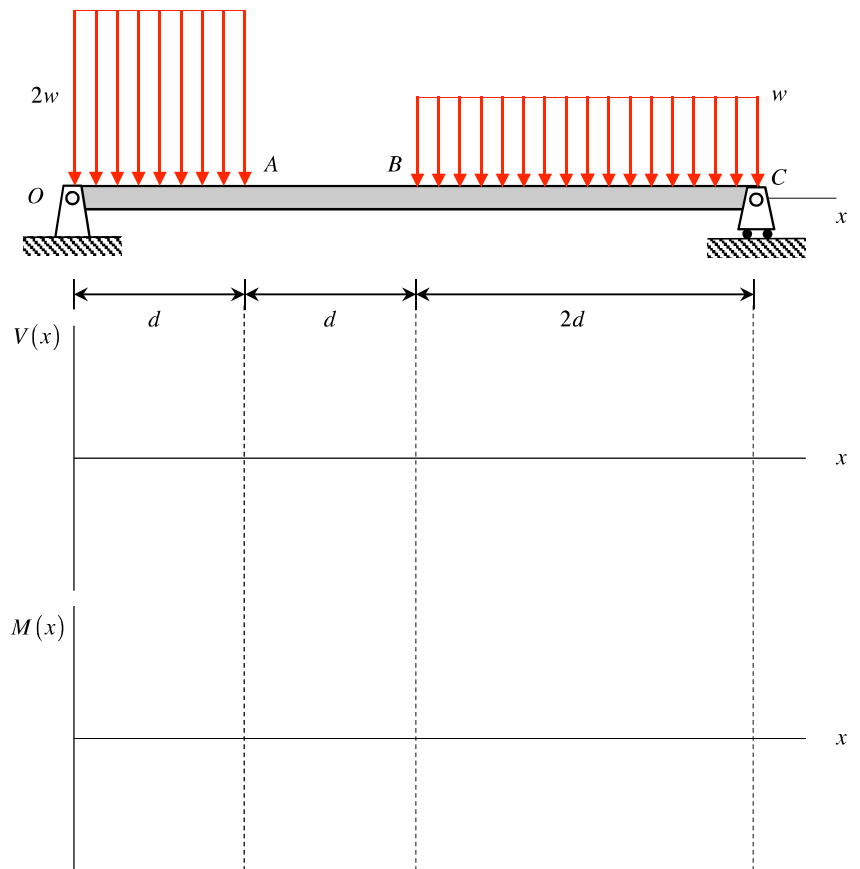
**Homework H35.A**

**Given:** Consider the beam loaded as shown below. The beam has a solid circular cross section with a radius of  $R$ .

**Find:** For this problem:

- a) Determine the location(s) for which pure bending exists on the cross section of the beam.
- b) For the location(s) found in a) above, determine the maximum normal stress.

For this problem, use the following parameters:  $d = 4$  ft,  $w = 10$  kips/ft and  $R = 3$  in.



**Homework H35.B**

**Given:** Consider the beam loaded as shown below. The beam has a solid square cross section with cross-section dimensions  $b \times b$ .

**Find:** For this problem:

- a) Determine the location(s) for which pure bending exists on the cross section of the beam.
- b) For the location(s) found in a) above, determine the maximum normal stress.

For this problem, use the following parameters:  $d = 2$  m,  $w = 10$  kN/m and  $b = 100$  mm.

