

### Homework H36.B

**Given:** Consider the beam loaded as shown below. The beam has a rectangular cross section with cross-section dimensions of  $b \times h$ , where  $b$  is the dimension into the page.

**Find:** For this problem:

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

For this problem, use the following parameters:  $d = 1$  m,  $P = 10$  kN,  $w = 30$  kN/m,  $b = 0.3$  m and  $h = 0.3$  m.

