CIV102F Quiz #8: Friday AM November 6, 2020
Flexural Stresses

The beam shown below is made from Oak. Do the following:

1. Calculate the relevant cross-sectional properties
2. Draw the shear force and bending moment diagrams caused by the uniform load of 10 kN/m
3. Calculate the maximum tensile and compressive stresses which occur in the beam. Indicate on the drawing where they occur.
4. Using your results from part 3, calculate the factors of safety against ultimate failure for both tension and compression. How will the beam fail if the loads were increased in the same proportion as they are now?

All dimensions are in mm.