We now can extend our work to systems of axially loaded members. We will start with statically determinant systems of members.
Problem P5.14

If you had drawn the FBD of the horizontal bar, you would have seen that there are four unknowns involved as therefore the system could not be solved with Statics methods alone.

Considering the information given, you have the strain in bar (1) and the cross-section area. You could use this to calculate the stress in bar (1).
Problem P5.20

Three aluminum \([E = 10,000 \text{ ksi}]\) bars are used to support the loads shown. The elongation in each bar must be limited to 0.25 in. Determine the minimum cross-sectional area required for each bar.

Homework

- P 5.16
- P 5.21
- P 5.22