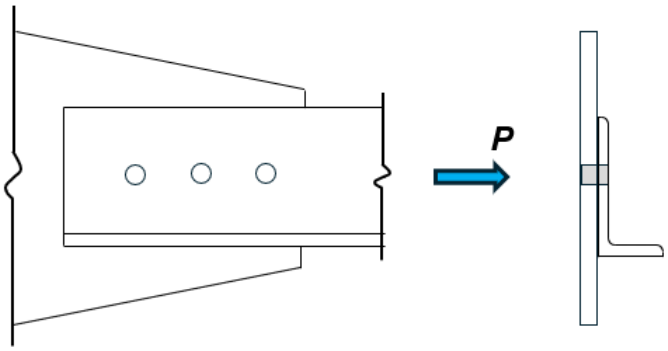
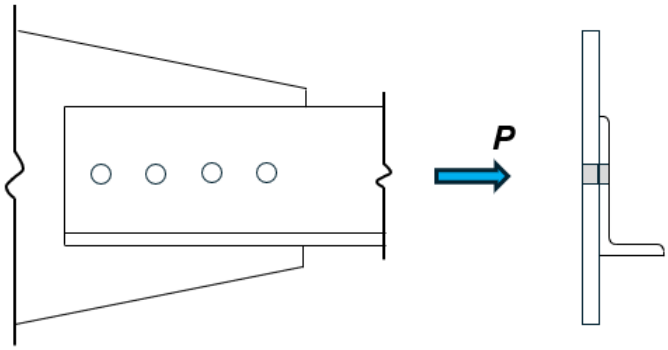
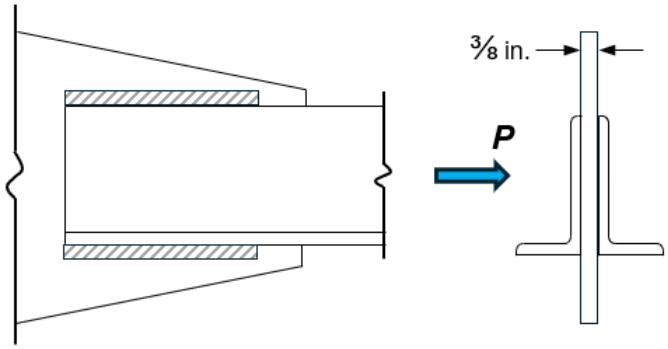
**<u>Classroom Problem 3.6-1</u>**: Use ***LRFD*** to select a tension member for a roof truss of **A572** Grade 50 steel ($F_y$ = 50 *ksi*, $F_u$ = 65 *ksi*). The axial dead load is 60 *k*, the live load is 6 *k*, and the member is 12 ft. long. Assume ⅞-in.-diameter bolts located on a single gage line.



**<u>Classroom Problem 3.6-2</u>**: Use ***LRFD*** to select a single angle of **A572** Grade 50 steel ($F_y$ = 50 *ksi*, $F_u$ = 65 *ksi*) to support a dead load of 15 *k* and the live load is 40 *k*. The tension member is 15 ft. long. Assume ¾-in.-diameter bolts located on a single gage line of at least four bolts.



**<u>Classroom Problem 3.6-3</u>**: Use ***LRFD*** to select a pair of angles of **A572** Grade 50 steel ($F_y$ = 50 *ksi*, $F_u$ = 65 *ksi*) to support a dead load of 50 *k* and the live load is 30 *k.* The tension member is 22 ft. long. Assume the angles are back-to-back, separated by a ⅜-in. gusset plate, and that the connection is welded, and that ***U*** = 0.85.



**<u>Classroom Problem 3.6-4</u>**: Use ***LRFD*** to select a single angle of **A572** Grade 50 steel ($F_y$ = 50 *ksi*, $F_u$ = 65 *ksi*) to support a dead load of 15 *k* and the live load is 40 *k*. The tension member is 15 ft. long. Assume ¾-in.-diameter bolts located on a single gage line of at least four bolts. Use ***Table 5-2*** in Part 5 of the ***Manual.***