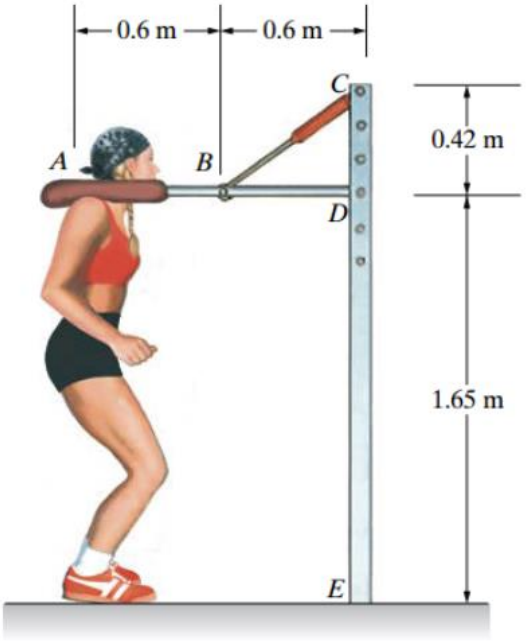
GEN_ENG 205-2: Engineering Analysis II Points – 60

Homework #6

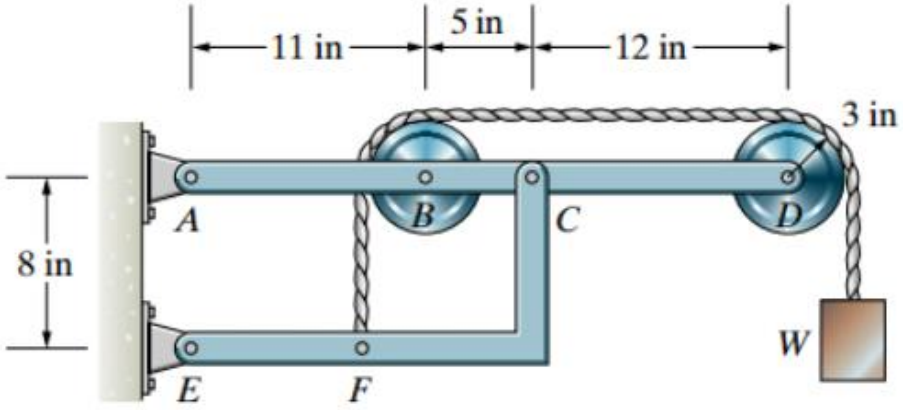
Problem 1 (6.78)

An athlete works out with a squat thrust machine. To rotate the bar *ABD*, she must exert a vertical force at *A* that causes the magnitude of the axial force in the two-force member *BC* to be 1800 N. When the bar *ABD* is on the verge of rotating, what are the reactions on the vertical bar *CDE* at *D* and *E*?



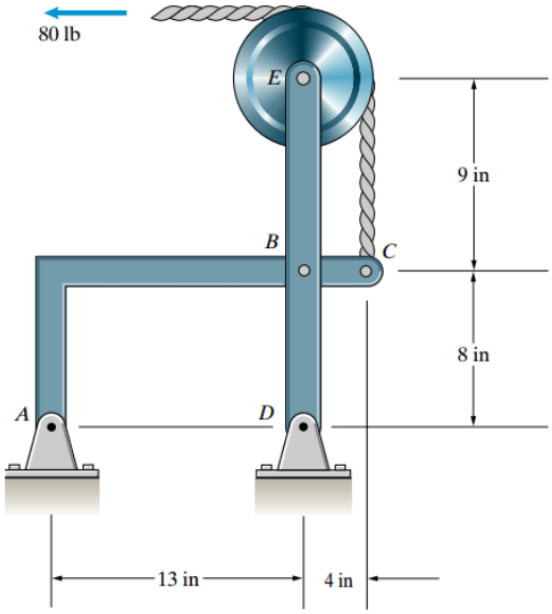
Problem 2 (6.88)

The weight $W = 80$ lb. Determine the forces on member *ABCD*.



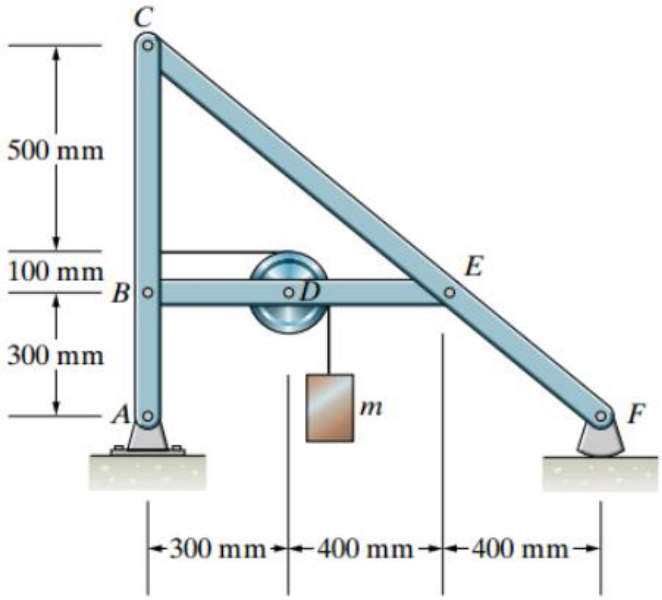
Problem 3 (6.90)

Determine the reactions on member *ABC* at *A* and *B*.



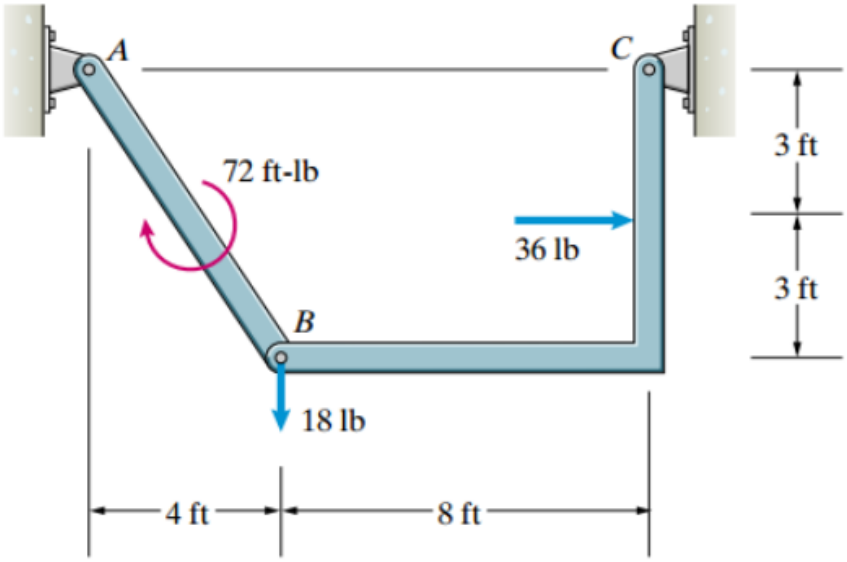
Problem 4 (6.93)

The pin support *B* will safely support a force of 24-kN magnitude. Based on this criterion, what is the largest mass *m* that the frame will safely support?



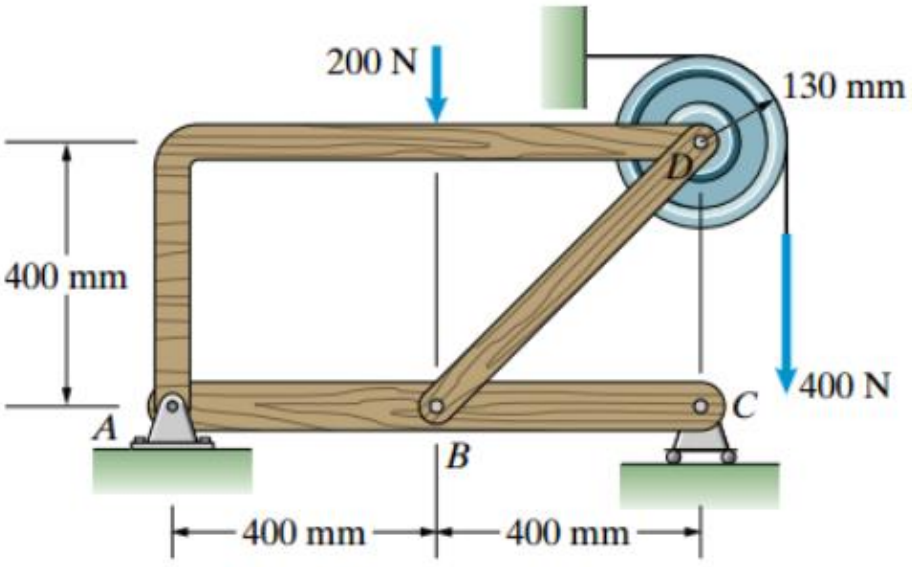
Problem 5 (6.94)

Determine the reactions at *A* and *C*.



Problem 6 (6.95)

Determine the forces on member *AD*.



Problem 6.95