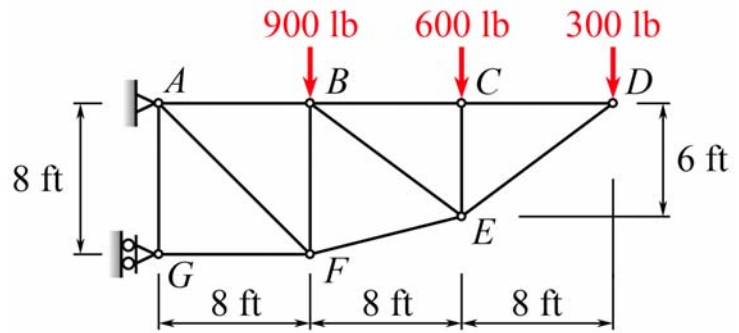


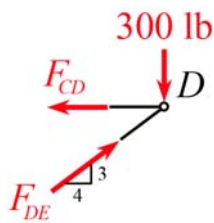
MEEG 2003 Quiz #8.m24.103

1. ② Define (a) a *simple truss*, (b) a *compound truss*.

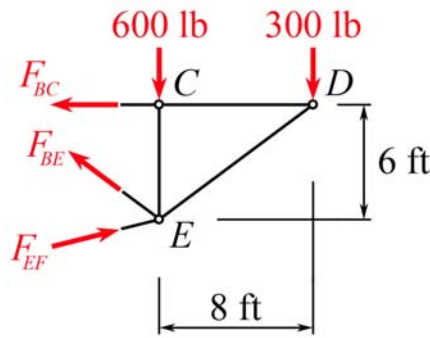
2. ⑧ Determine the axial forces F_{DE} , F_{BC} , F_{FG} , F_{AB} in members DE , BC , FG , AB of the truss shown. Use T or C to indicate whether each of these forces is a *tensile* force or *compressive* force.



2.



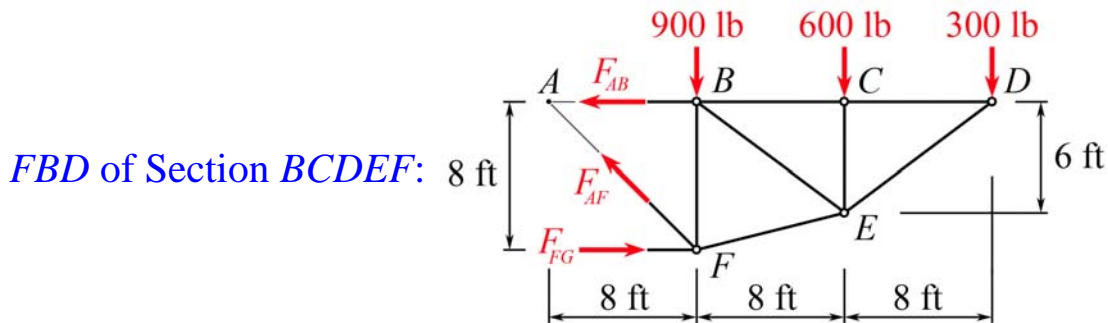
①



①

FBD of Joint D: $+\uparrow \Sigma F_y = 0: \frac{3}{5} F_{DE} - 300 = 0$ $F_{DE} = 500 \text{ lb } C$ ①

FBD of Section CDE: $+\circlearrowleft \Sigma M_E = 0: 6F_{BC} - 8(300) = 0$ $F_{BC} = 400 \text{ lb } T$ ①



②

$+\circlearrowleft \Sigma M_A = 0: 8F_{FG} - 8(900) - 16(600) - 24(300) = 0$ $F_{FG} = 3.00 \text{ kips } C$ ①

$+\circlearrowleft \Sigma M_F = 0: 8F_{AB} - 8(600) - 16(300) = 0$ $F_{AB} = 1200 \text{ lb } T$ ①