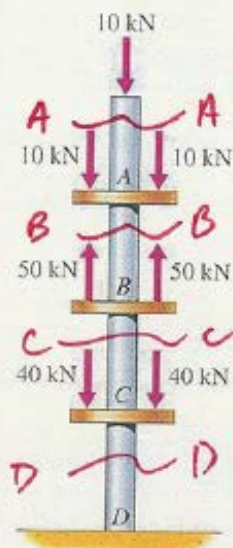## Internal Forces I

Determine the maximum axial load transmitted by any transverse cross section of the bar.
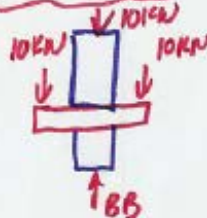

FBD Cut AA

$\uparrow \Sigma F_y = 0 = -10 + AA$
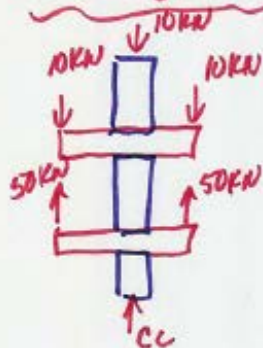
$AA = 10 \, KN \, (C)$

FBD Cut BB

$\uparrow \Sigma F_y = 0 = -10 - 10 - 10 + BB$

$BB = 30 \, KN \, (C)$
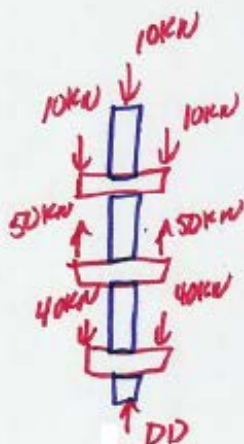
FBD Cut CC

$\uparrow \Sigma F_y = 0 = -10 - 10 - 10 + 50 + 50 + CC$

$CC = -70 = 70 \, KN \, (T)$

FBD Cut DD

$\uparrow \Sigma F_y = 0 = -10 - 10 - 10 + 50 + 50 - 40 - 40 + DD$

$DD = 10 \, KN \, (C)$