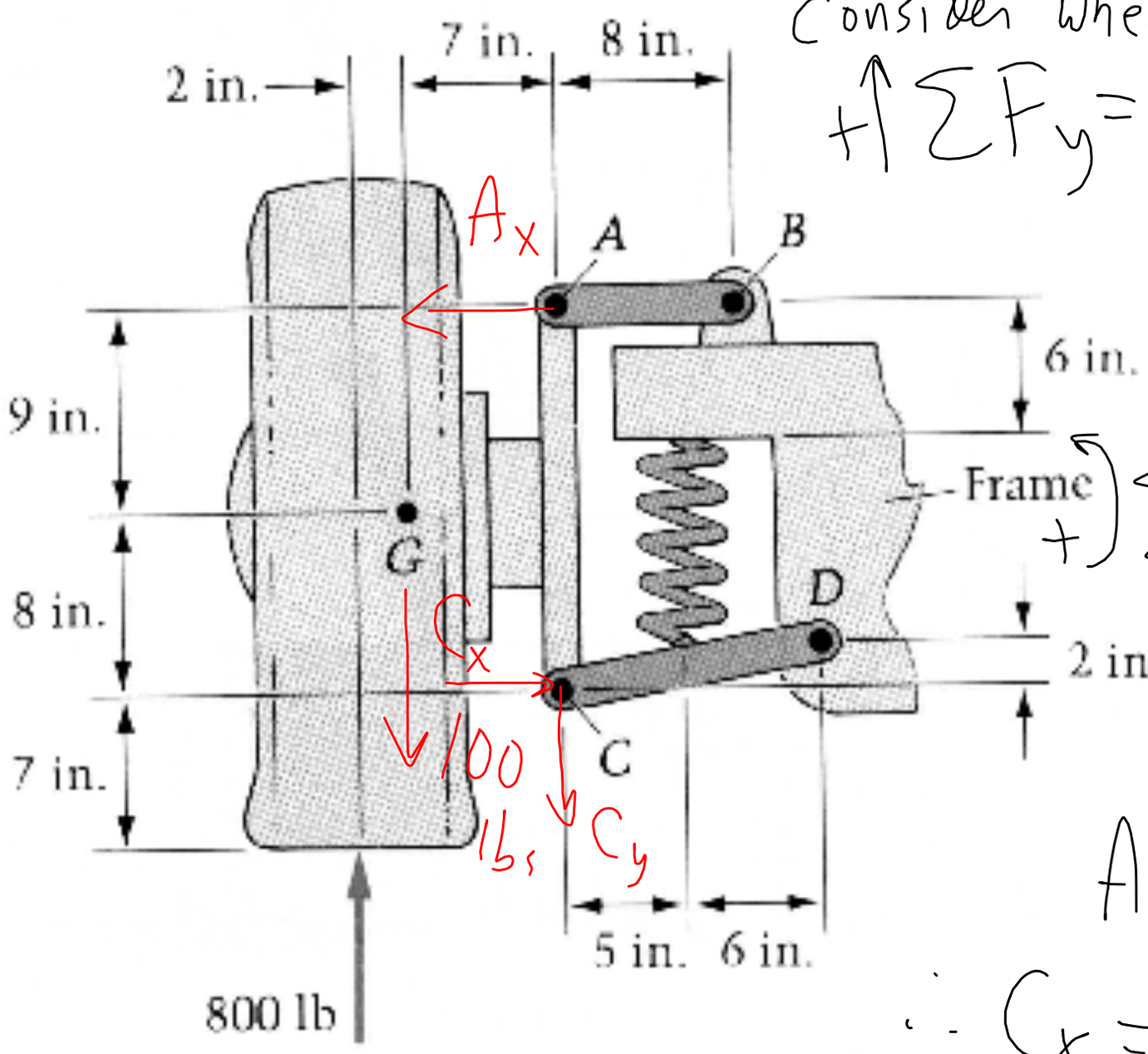


Consider wheel + hub only

$+\uparrow \sum F_y = 800 - 100 - C_y = 0$

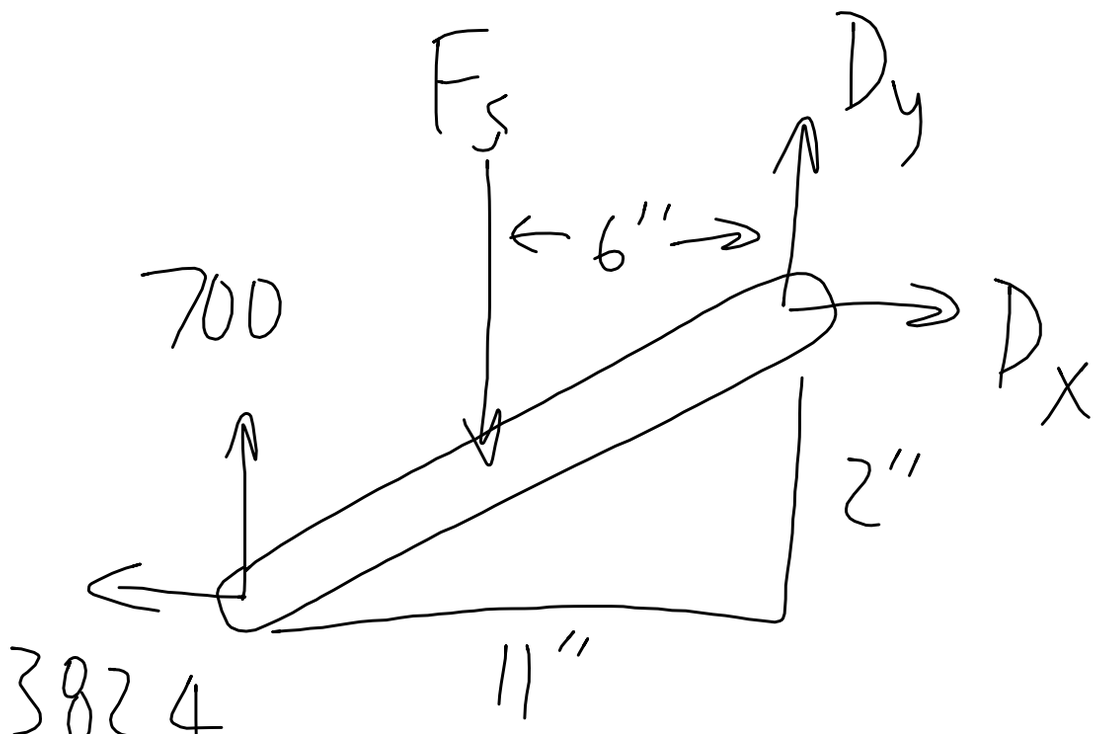
$C_y = 700$ lbs

$+\circlearrowleft \sum M_C = A_x(17) + 100(7) - 800(9) = 0$

$A_x = 382.4$ lbs

$\therefore C_x = 382.4$ lbs

$\therefore$ Force on frame @ B is 382.4 lbs $\rightarrow$



Then

$\xrightarrow{+} \Sigma F_x \Rightarrow \quad D_x = 382.4$

$+\uparrow \Sigma F_y = 700 - 1411 + D_y = 0$

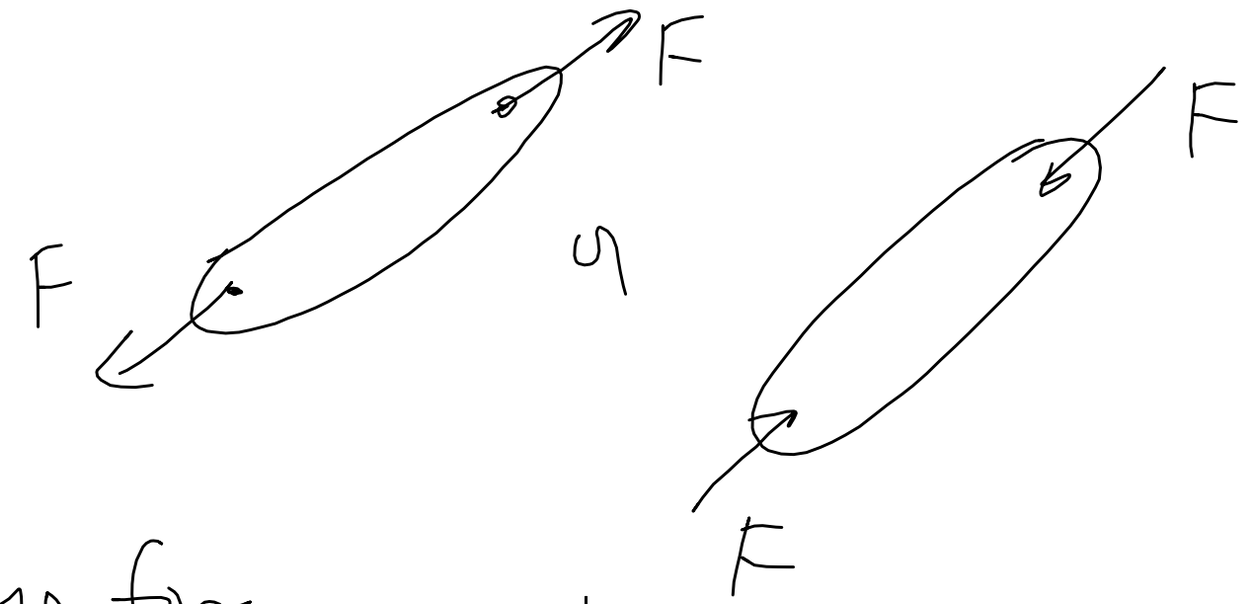
$D_y = 711 \text{ lbs}$

$+\circlearrowleft \Sigma M_D = F_s(6) - 382.4(2) - 700(11) = 0$

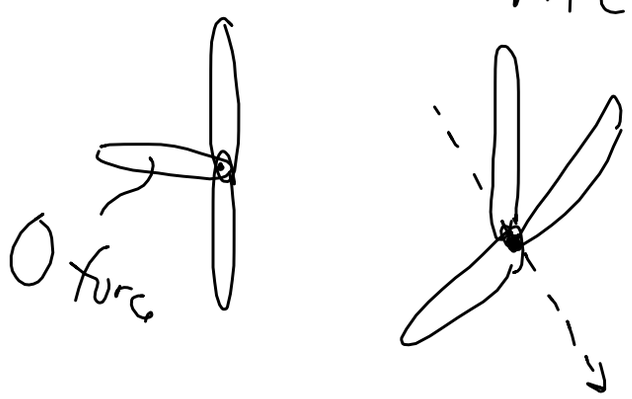
$F_s = 1411 \text{ lbs}$

Structures made of pinned membes

1. 2-force membes

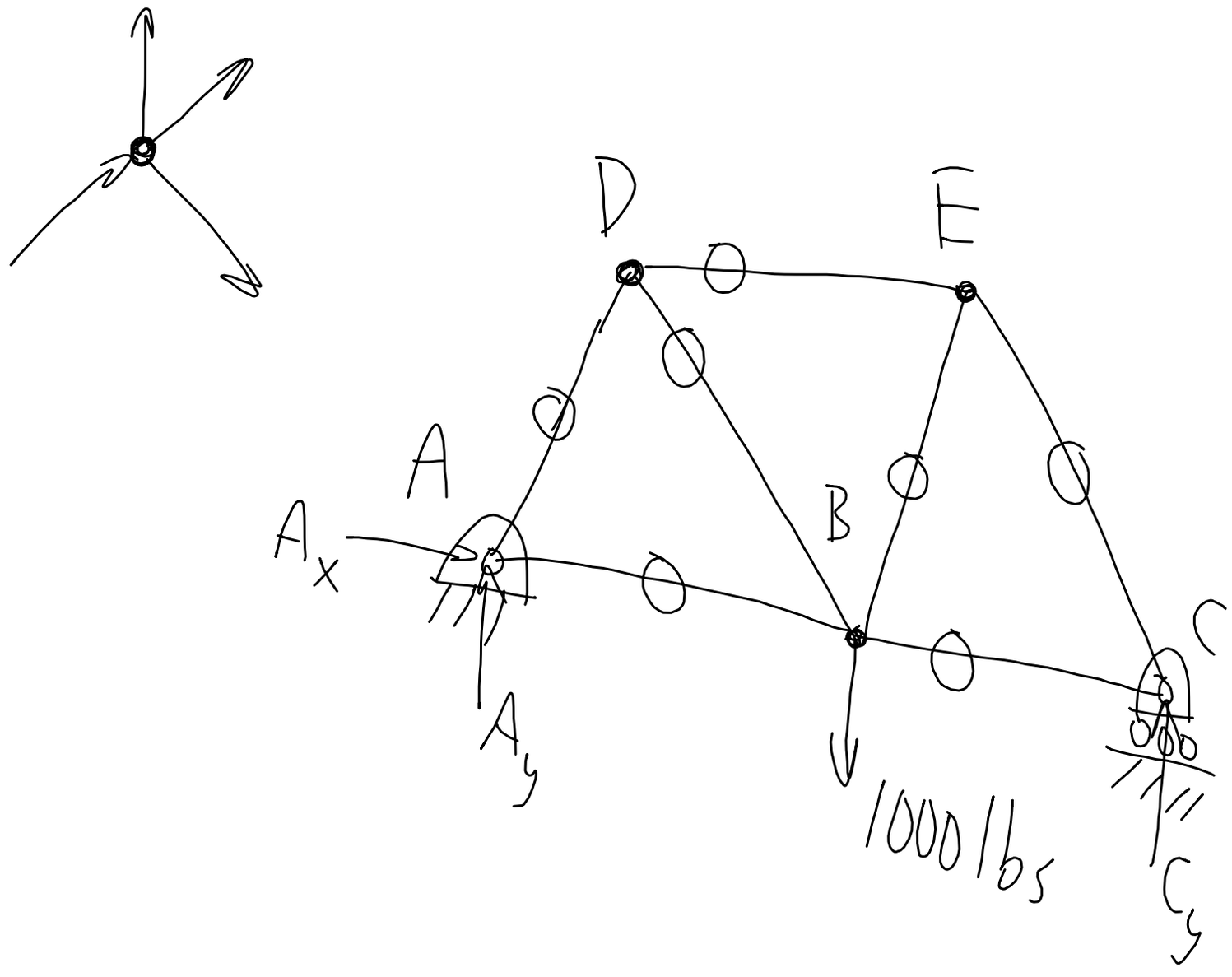


2. Zero force members

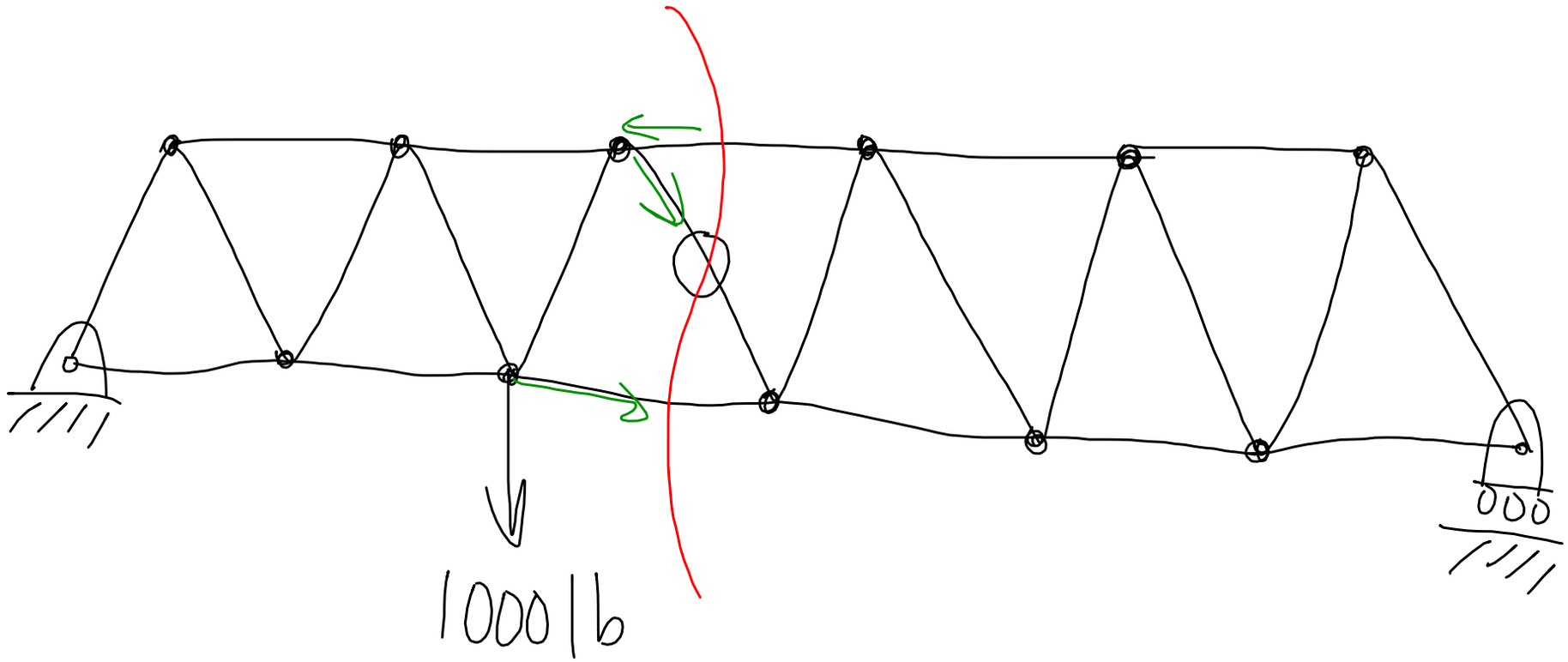


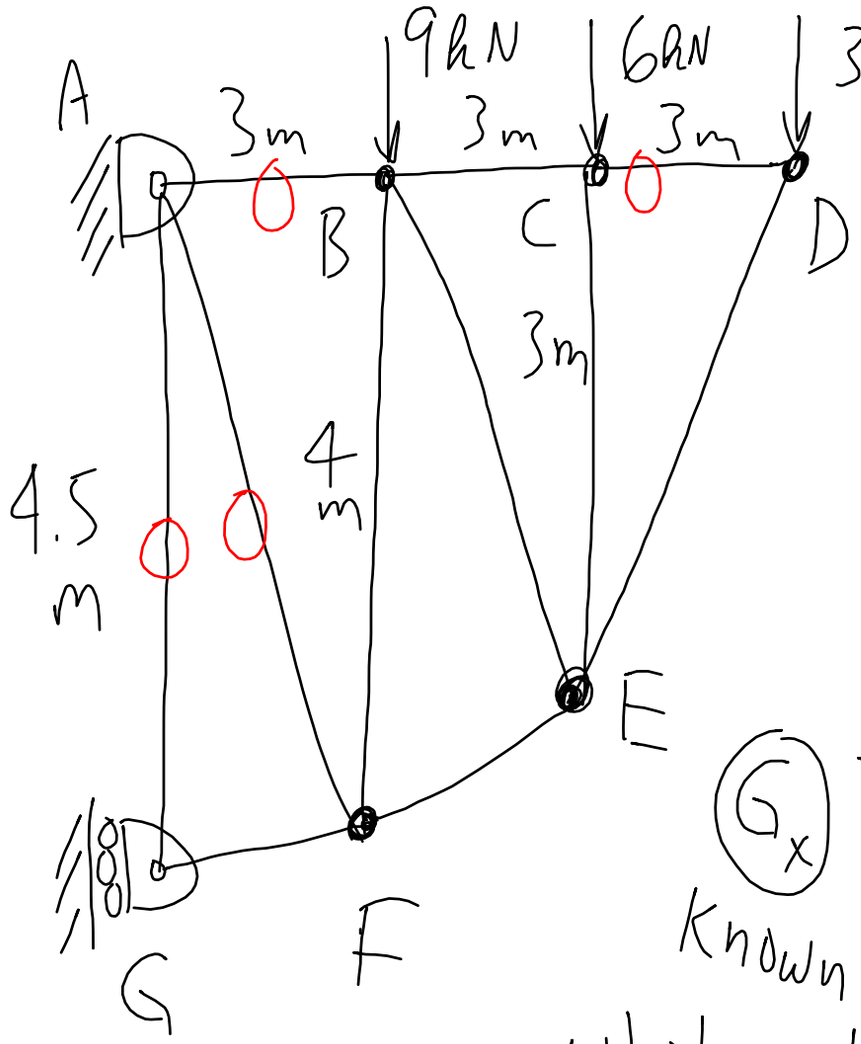
2 Methos:

1) Method of pins



2. Method of Sections

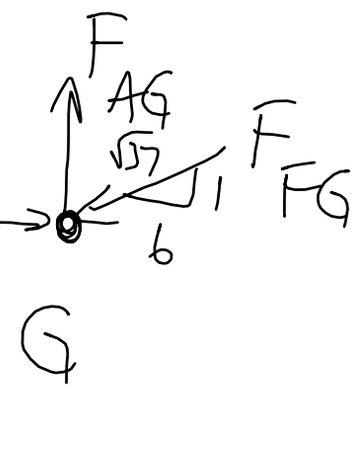




O = solve

whole structure,

$\Sigma M_A \Rightarrow G_x$



G_x known

whole structure, $\Sigma F_x \Rightarrow A_x = G_x$

FBD of A $\Rightarrow F_{AB}$ & F_{AF}

FBD of D $\Rightarrow F_{CD}$