Exam

All material through Distributed loads and 2D centroids via integration

Open Notes

Will provide centroid table

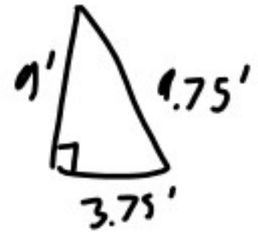
Calculators Allowed

Probably 3 problems

Lacey Makerspace

Force in

AB
AC
BC



$R_{Bx} = 0$

$\Sigma M_B = 0 \Rightarrow R_C = 720\,\text{lb}$

$\Sigma F_y = 0 \Rightarrow R_{By} = 225\,\text{lb}$

$\sqrt{9^2 + 3.75^2} = 9.75$

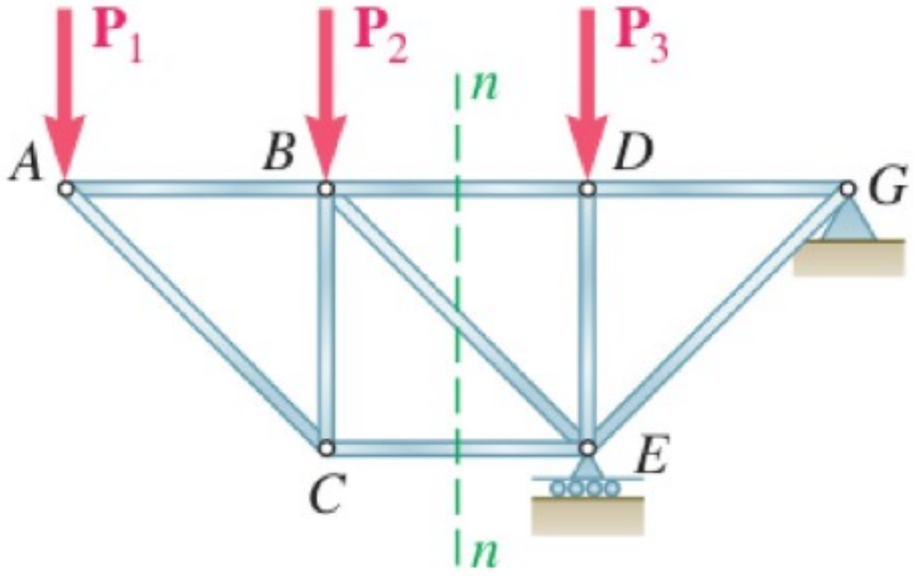
$\frac{F_{BC}}{R_C} = \frac{3.75}{9}$

$F_{BC} = R_C \frac{3.75}{9}$

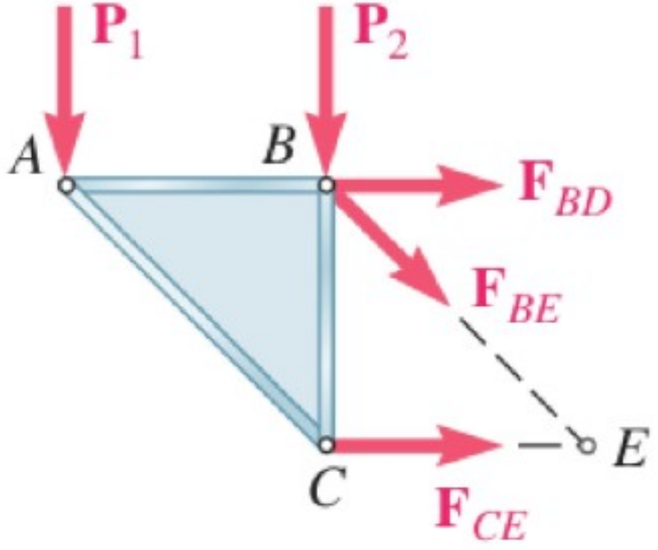
$= 720 \frac{3.75}{9} = 300\,\text{lb}$

$\frac{F_{AC}}{R_C} = \frac{9.75}{9}$ $\quad F_{AC} = 720 \frac{9.75}{9}$

$= 780\,\text{lb}$



(a)



6.45 Determine the force in members *BD* and *CD* of the truss shown.

6.46 Determine the force in members *DF* and *DG* of the truss shown.

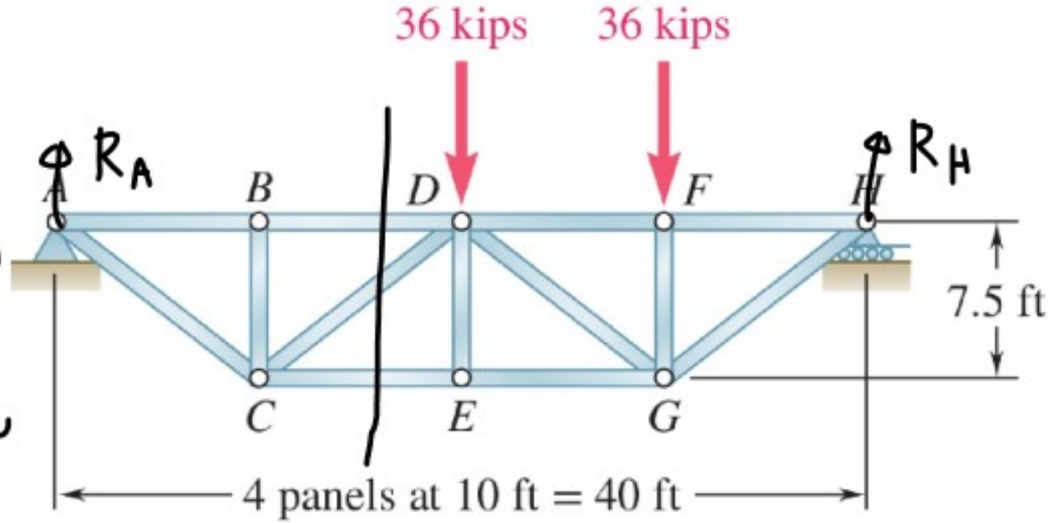
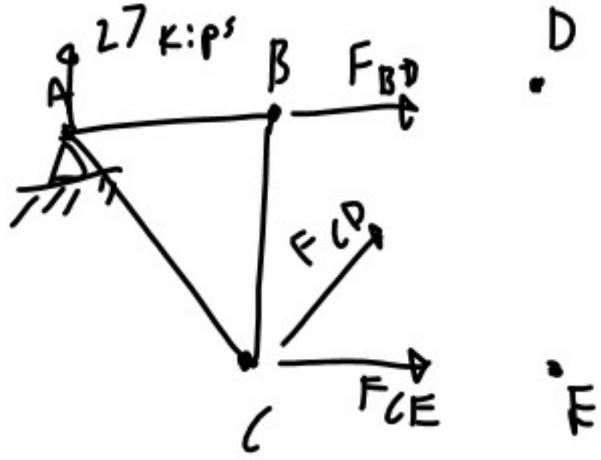


Fig. P6.45 and P6.46

$\Sigma M_H = 10 \cdot 36 + 20 \cdot 36 - 40 R_A$

$R_A = \frac{10 \cdot 36 + 20 \cdot 36}{40} = 27 \text{ kips}$



$\Sigma M_C = -10 \cdot 27 - 7.5 F_{BD}$