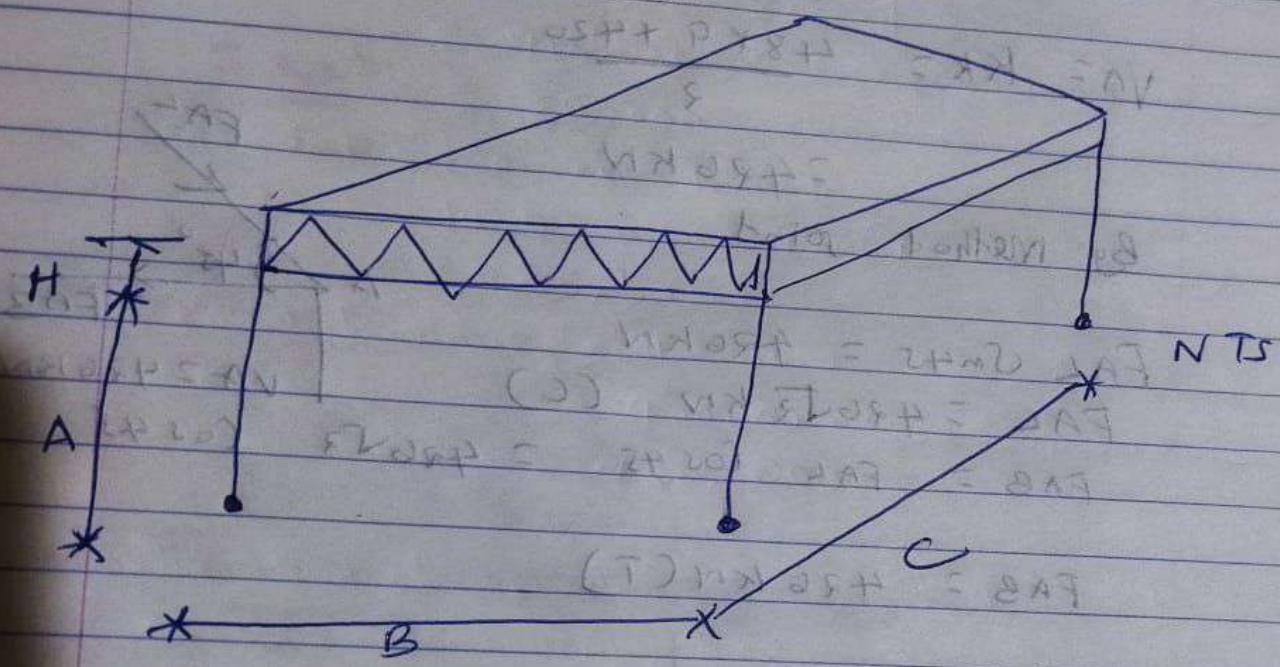
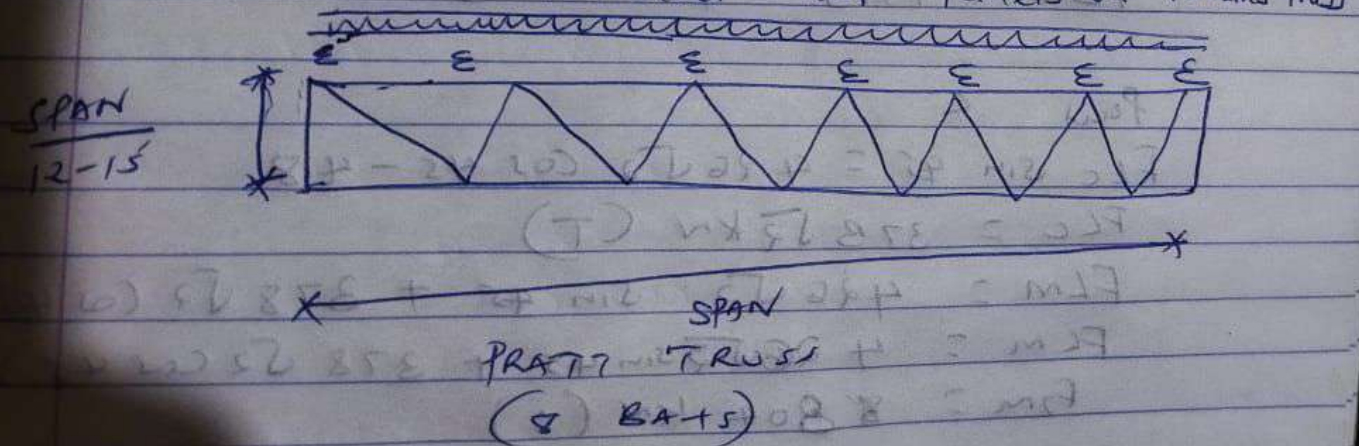
Industrial Warehouse





PRATT TRUSS
(8 BAYS)

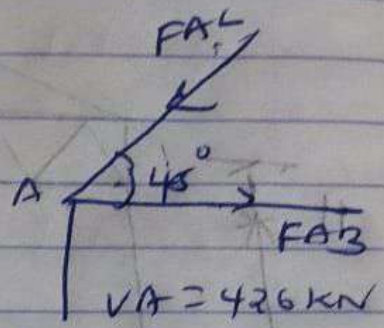
a)

Forces in truss Member when Live load is at point F/A

$V_A = K_k = \frac{48 \times 9 + 420}{2}$

$= 426\ KN$

By Method joint



$F_{AL} \sin 45 = 426 KN$

$F_{AL} = 426\sqrt{2}\ KN\ (C)$

$F_{AB} = F_{AL} \cos 45 = 426\sqrt{2} \cos 45$

$F_{AB} = 426\ KN\ (T)$

Point B

$F_{BL} = 48 KN\ (T)$

$F_{BC} = F_{AB} = 426 KN\ (T)$

Point C

$F_{LC} \sin 45 = 426\sqrt{2} \cos 45 - 48$

$F_{LC} = 378\sqrt{2} KN\ (T)$

$F_{LM} = 426\sqrt{2} \sin 45 + 378\sqrt{2} \cos 45$

$F_{LM} = 426\sqrt{2} \sin 45 + 378\sqrt{2} \cos 45)$

$F_{2M} = 804\ KN\ (C)$

$= 804 KN\ (C)$

(b) Load, LEC1

Calculate through Maximum deflection.

$$= \frac{WL^3}{48EI} = \frac{5WL^4}{384EI}$$

$$\left[\frac{16 \times 83}{48 \times 1500 \times 3} + \frac{5 \times 5.8 \times 4 \times 8.4}{384 \times 1500}\right] \frac{12}{0.001}$$

E = 1500 Ksi

1 kip = 0.001 Psi

$$\left[\frac{0.11377}{I} + \frac{0.024}{1}\right] \cdot 8 \cdot 14000$$

$$\frac{0.937}{1} \times 14400$$

$$= \frac{13503858}{I}$$

1 804 kN (C)

2 436 kN

3 $436\sqrt{3}$ kN

4 368 kN.