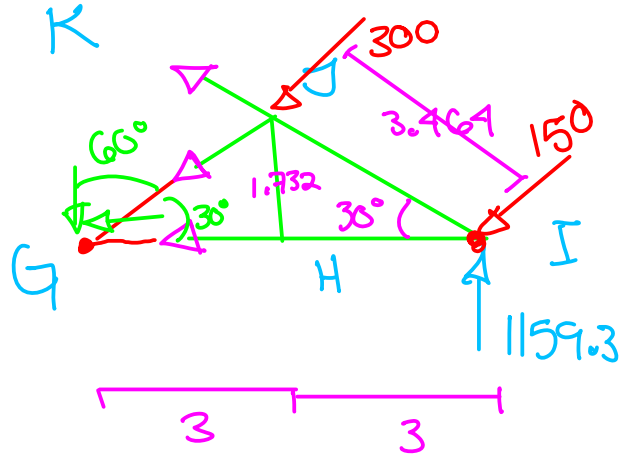


$$\sum F_y = 150 \cos 30 (14) + 500 - 2R = 0$$

$$R = 1159.3 \text{ lb.}$$



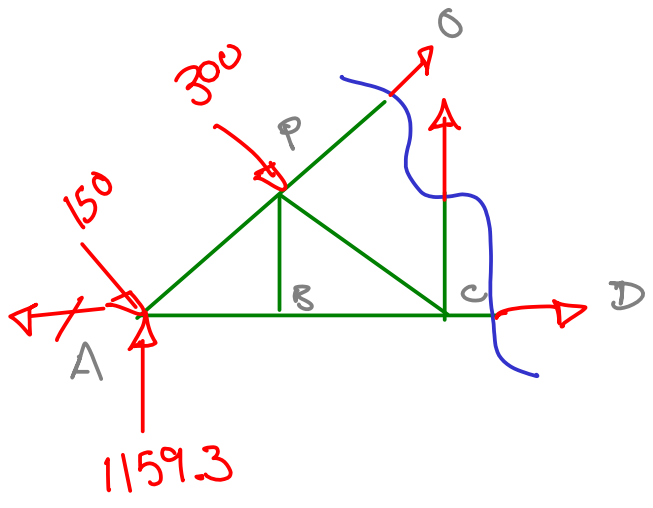
$$\cos 30 = \frac{3}{h} \quad h = 3.464$$

$$\tan 30 = \frac{c}{3} \quad c = 1.732$$

$$\sum M_I = F_{GJ} (\cos 60) (6) + 300 (3.464) = 0$$

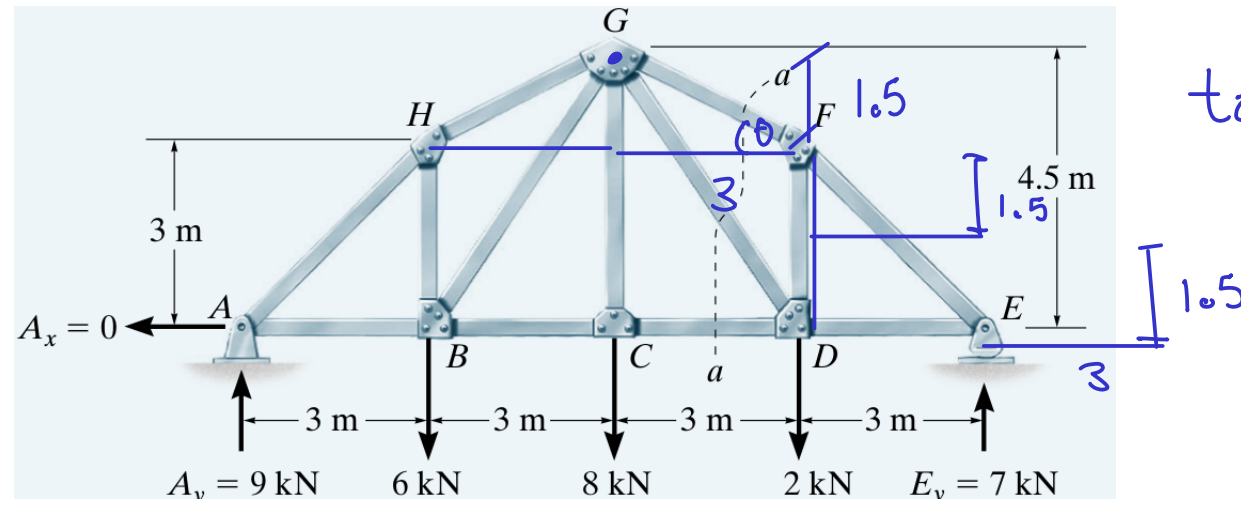
$$F_{GJ} = -346.4 \text{ lb}$$

$$F_{GJ} = 346.4 \text{ lb} \nearrow$$



$$\sum M_A = 300 (3.464) - F_{CO} (6) = 0$$

$$F_{CO} = 173.2 \text{ lb.}$$



$$\tan \theta = \frac{1.5}{3}$$

$$\theta = \tan^{-1} \left( \frac{1.5}{3} \right)$$

$$\theta = 26.57^\circ$$

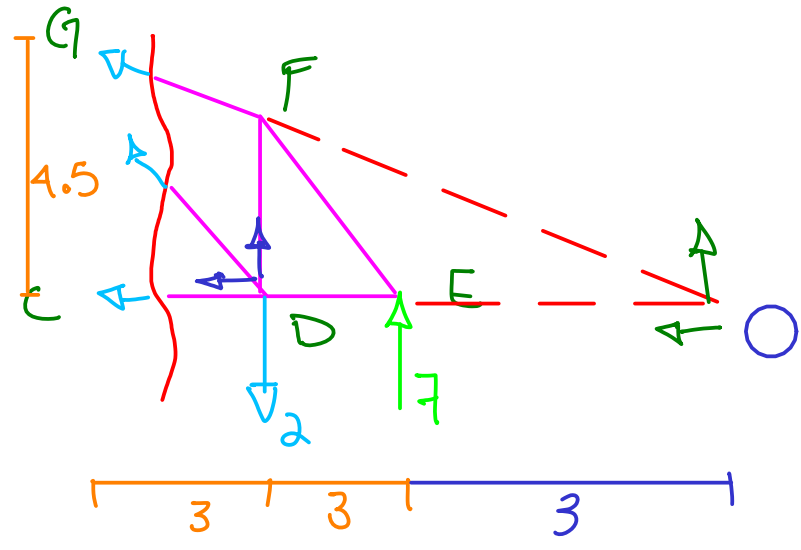
$$\sin 26.57^\circ = 0.447$$

$$\frac{1.5}{\sqrt{3^2 + 1.5^2}} = \frac{\sqrt{5}}{5}$$

$$0.447$$

$$\sum M_A = 6(3) + 8(6) + 2(9) - E_y(12) = 0 \quad E_y = 7$$

$$\sum F_y = A_y - 6 - 8 - 2 + 7 = 0 \quad A_y = 9$$



$F_{GF}$

$$\sum M_D = F_{GF} \left( \frac{\sqrt{5}}{5} \right) 6 + 7(3) = 0$$

$$F_{GF} = -7.83 \text{ kN}$$

$$F_{GF} = 7.83 \text{ kN } \rightarrow (c)$$

$$\sum M_O = 7(3) - 2(6) + F_{GD} \left( \frac{4.5}{\sqrt{1.5^2 + 3^2}} \right) (6) = 0$$

$$F_{GD} = -1.8 \text{ kN}$$

$$F_{GD} = 1.8 \text{ kN } \rightarrow (d)$$

$$5 F_{GD} = -21 + 12$$

$$F_{GD} = -1.8$$