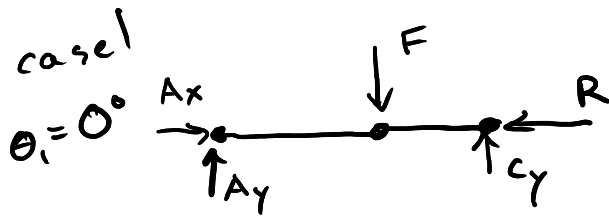
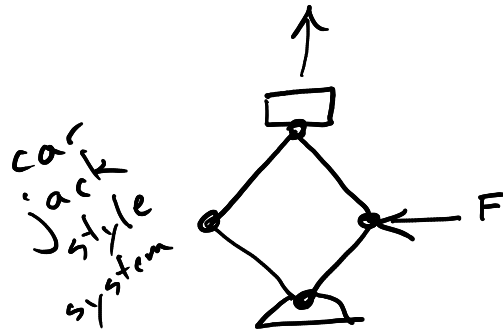
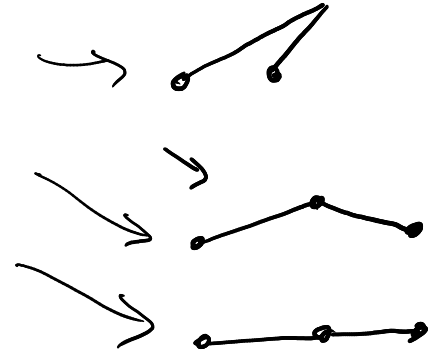
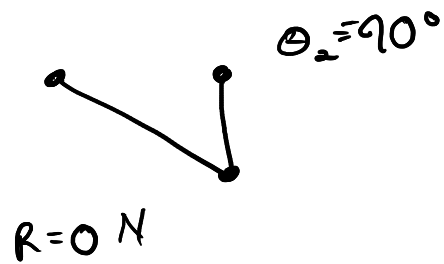
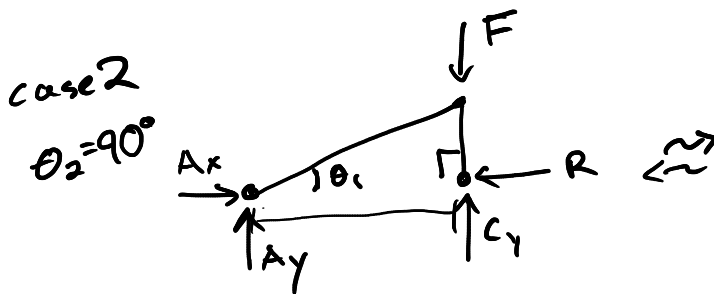


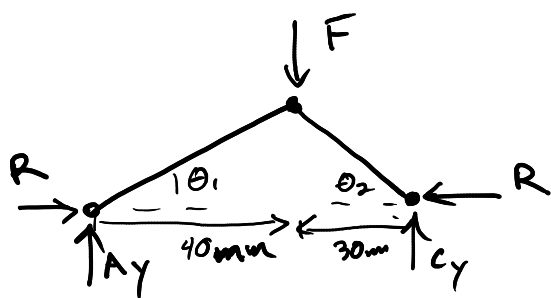
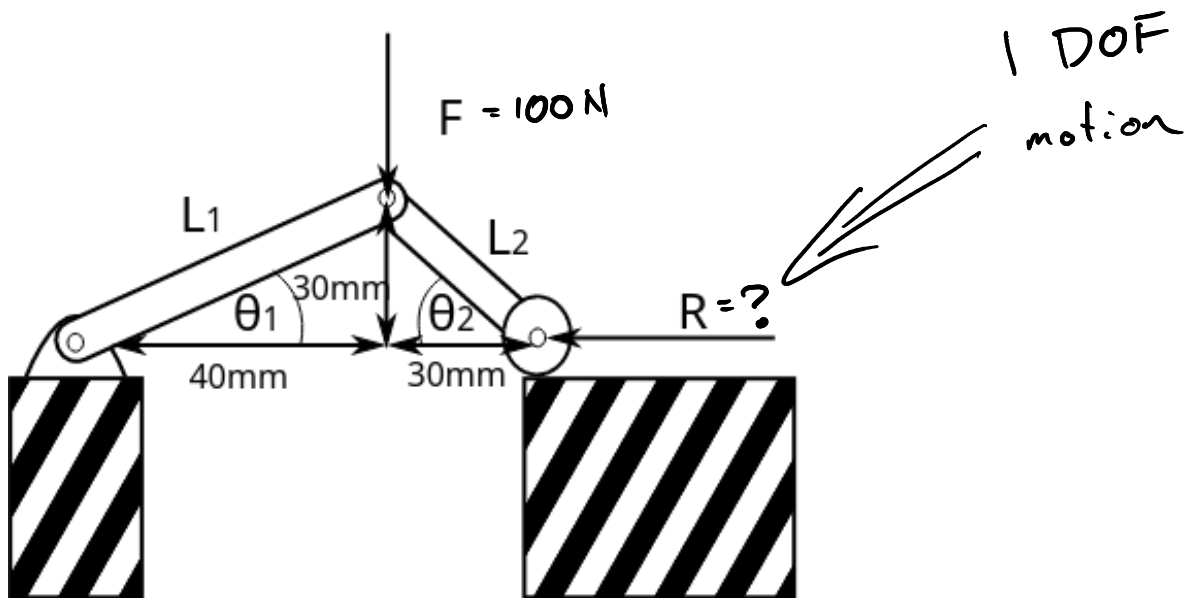
when is $R=0$

$\theta_1 = ?$



technically $\theta_2 \approx 0^\circ$
 $R = \pm \infty \text{ N}$





$$\sin \theta_1 = \frac{3}{5}$$

$$\theta_2 = 45^\circ$$

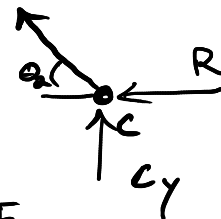
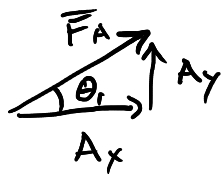
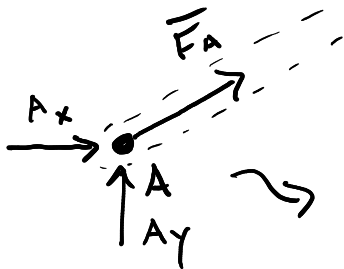
$$\sum F_x = A_x - R = 0 \rightarrow R = A_x$$

$$\sum F_y = A_y + C_y - F = 0$$

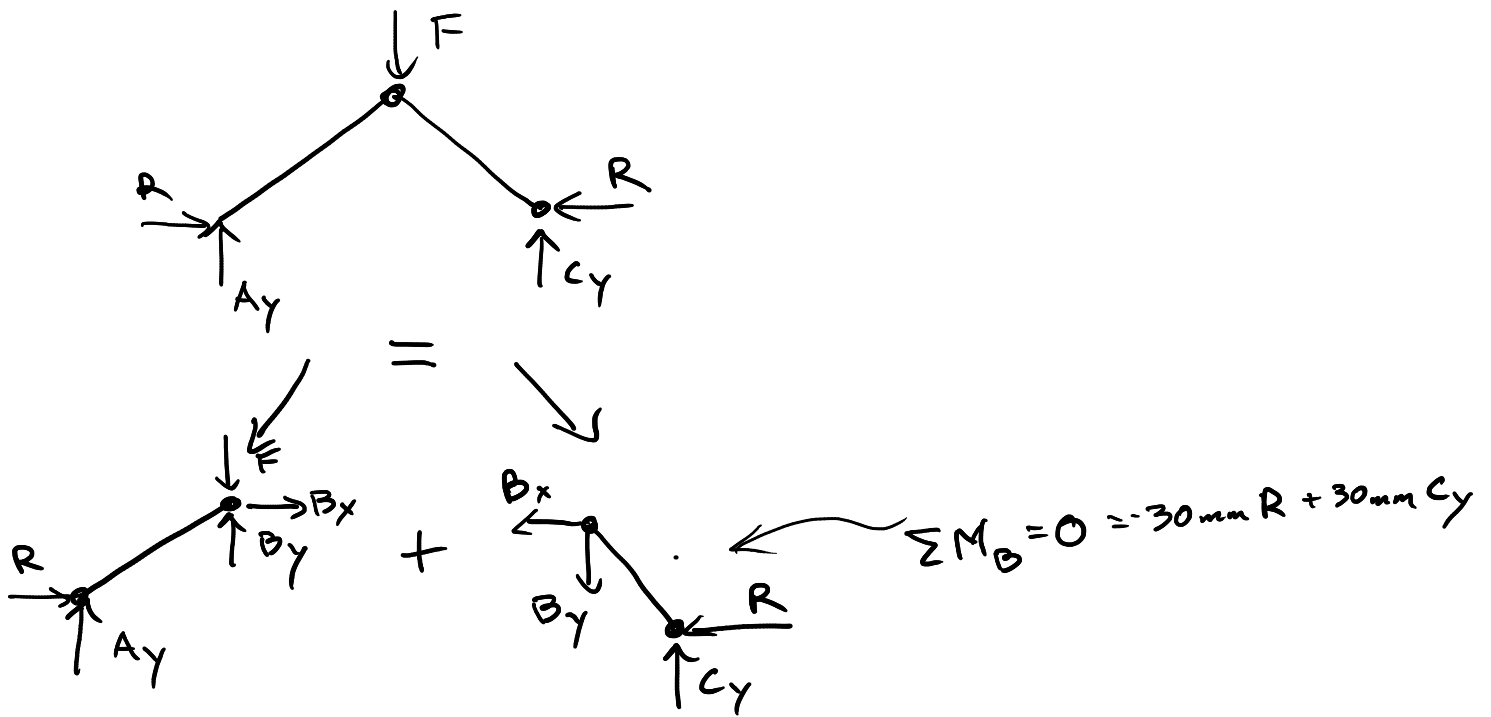
$$\sum M_c = 30 \text{ mm} \cdot F - 70 \text{ mm} \cdot A_y \rightarrow A_y = \frac{3}{7} 100 \text{ N}$$

$$\downarrow$$

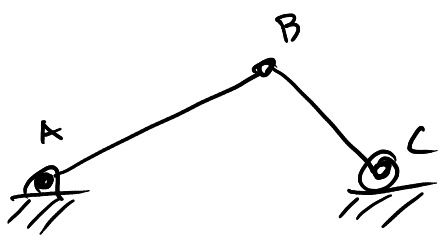
$$\rightarrow C_y = \frac{4}{7} 100 \text{ N}$$



$$\frac{C_y}{R} = \tan \theta_2$$



If you have motion, is $\Sigma M = 0$?



quasi static assumptions

$$\Sigma M_A = \frac{d}{dt}(h_A)$$

if $m \sim 0$

$$\Sigma M_A = 0$$

$$\text{if } \frac{d}{dt}(I_A \ddot{\theta})$$

$$\Sigma M \sim 0$$

