Top Loop Cont.

Friday, March 31, 2017 9:19 PM

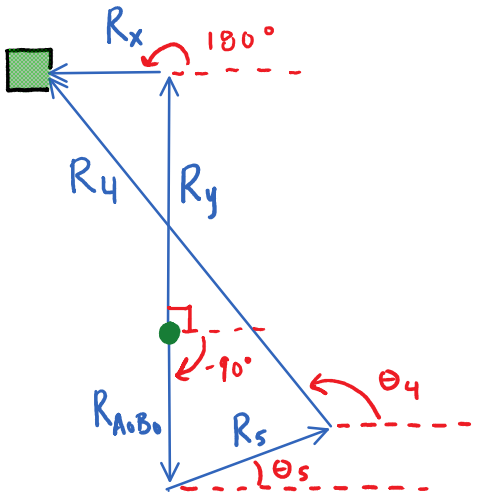
Accelerations:

$$X: \; l_{A_0A}\alpha_2^{\,0}(-\sin\theta_2) + l_{A_0A}\omega_2^2(-\cos\theta_2) + l_{AC}''\cos\theta_4 + l_{AC}'\omega_4(-\sin\theta_4)$$
$$+ l_{AC}'\omega_4(-\sin\theta_4) + l_{AC}\alpha_4(-\sin\theta_4) + l_{AC}\omega_4^2(-\cos\theta_4) + R_x'' = 0$$

$$Y: \; l_{A_0A}\alpha_2^{\,0}(\cos\theta_2) + l_{A_0A}\omega_2^2(-\sin\theta_4) + l_{AC}''(\sin\theta_4) + l_{AC}'\omega_4(\cos\theta_4)$$
$$+ l_{AC}'\omega_4(\cos\theta_4) + l_{AC}\alpha_4(\cos\theta_4) + l_{AC}\omega_4^2(-\sin\theta_4) = 0$$

Unknowns: l_{AC}'', α_4, R_x''

Bottom Loop:



Vector Loop #2:

$$R_{A_0B_0} + R_5 + R_4 - R_x - R_y = 0$$

Positions:

$$X: \; 0 + R_5\cos\theta_5 + R_4\cos\theta_4 - R_x - 0 = 0$$

$$Y: \; R_{A_0B_0}\underbrace{(\sin(-90))}_{-1} + R_5\sin\theta_5 + R_4\sin\theta_4 - 0 - R_y = 0$$

Unknowns: θ_5, θ_4 & R_x