Part 1 (b)

1. $M = R_x(a)\, R_y(b)\, R_z(C)$

a, b, C correspond to R_x, R_y, R_z respectively.

2. $N' = MNP$

$$p = T(x_0, y_0, z_0)R(\theta_0)R(\varphi_0)R(\delta_0)T_1^0 R(\theta_1)R(\varphi_1)R(\delta_1)T_2^1 R(\theta_2)T_3^2 R(\theta_3)R(\varphi_3)x$$

Followed by the formula from the lecture, we should multiply the rotation matrix from A to B as M, then multiply the rotation N in an arbitrary coordinate system B, last we multiply the joint's coordinates in A as p.

3. $P =$

Part 2.

https://drive.google.com/drive/folders/1dMkAiJDPgAzD86muCzP5ZRNFMdpE45U8?usp=sharing