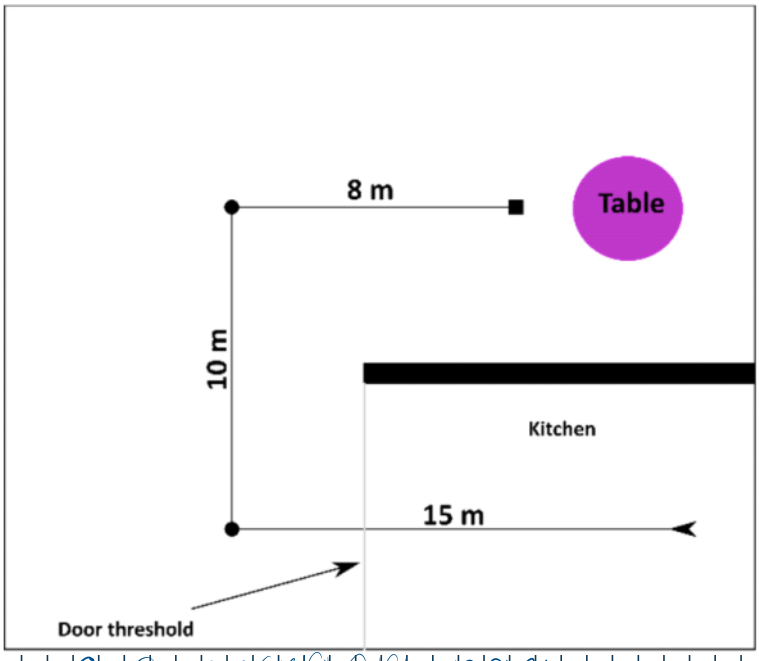
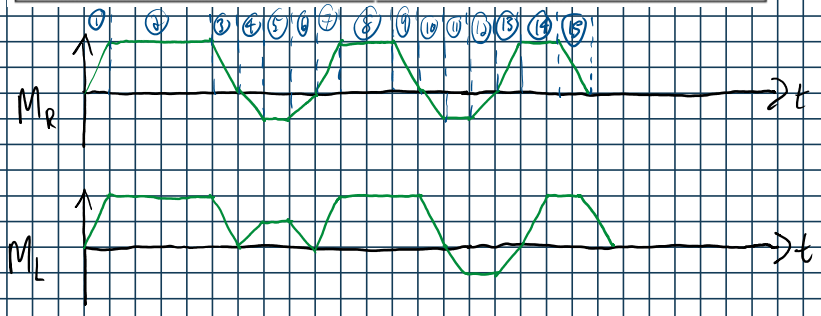
Path

July 25, 2025 3:07 PM





Assuming max speed is reached for each movement: ★ this needs to be checked once all max velocities and accelerations are chosen.

linear acceleration: $t_1 = t_3 = t_7 = t_9 = t_{13} = t_{15} = \frac{V_{max}}{a}$ $d_a = \frac{t_1 V_{max}}{2} = \frac{V_{max}^2}{2a}$

linear slew: $t_2 = \frac{15 - 2d_a}{V_{max}}$

$t_8 = \frac{10 - 2d_a}{V_{max}}$

$t_{14} = \frac{8 - 2d_a}{V_{max}}$

angular acceleration: $t_4 = t_6 = t_{10} = t_{12} = \frac{\omega_{max}}{\alpha}$ $\theta_a = \frac{t_4 \omega_{max}}{2} = \frac{\omega_{max}^2}{2\alpha}$

angular slew: $t_5 = t_{11} = \frac{\frac{\pi}{2} - 2\theta_a}{\omega_{max}}$