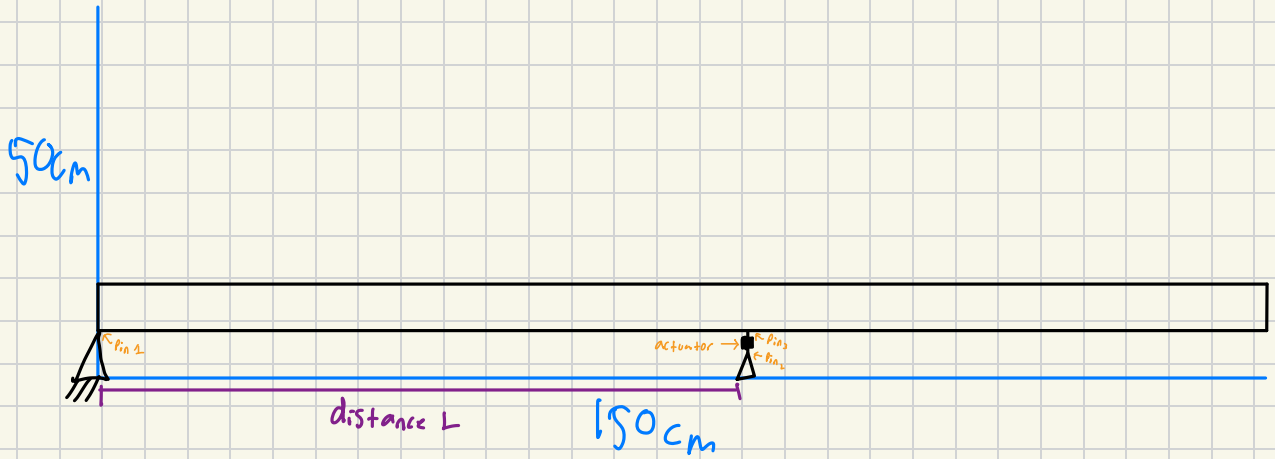
Portfolio

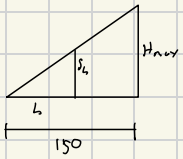
use Actuator RSX Max force = 294 kN

Stroke length = 1.5m



decrease L to increase height lifted

increase L to increase weight lifted



$$\sum M_{Pin\,1} = L \cdot F_{actuator} - 150 \cdot F_w = 0$$

$$L \cdot F_{actuator} = 150 \cdot m_g$$

$$m_{max} = \frac{L}{150} F_{actuator}$$

$$\frac{SL}{L} = \frac{H_{max}}{150cm}$$

$$H_{max} = \frac{150cm \cdot 150cm}{L}$$

L = 50cm increase any extra height above 1.5m seems excessive and we still have an acceptable m_{max} of aqpn.806 kg