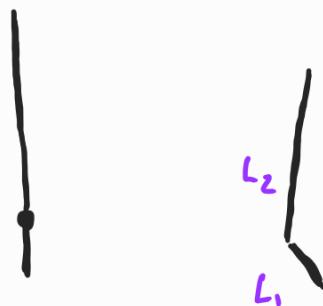
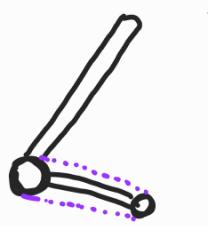


$$\phi = \alpha \theta$$

$\alpha > 1$



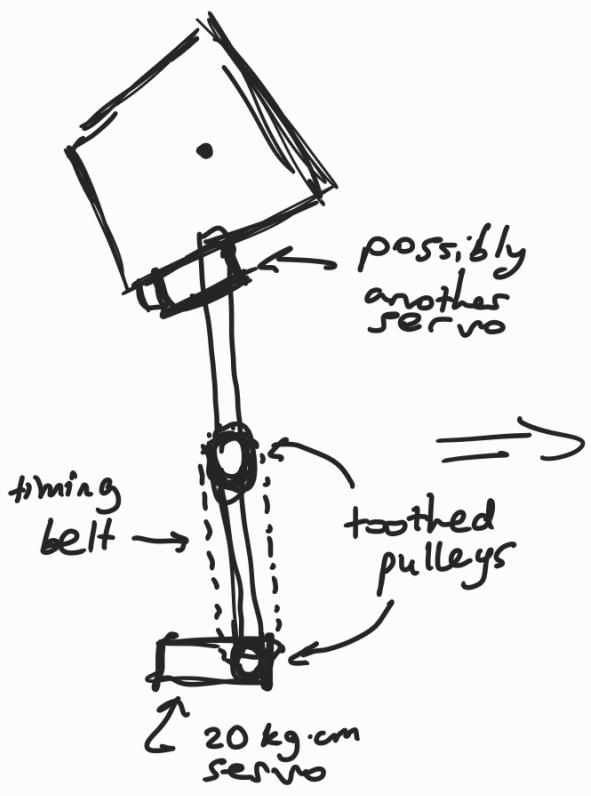
$$\frac{L_2}{\sin(90 - \theta)} = \frac{L_1}{\sin(90 - \phi)}$$



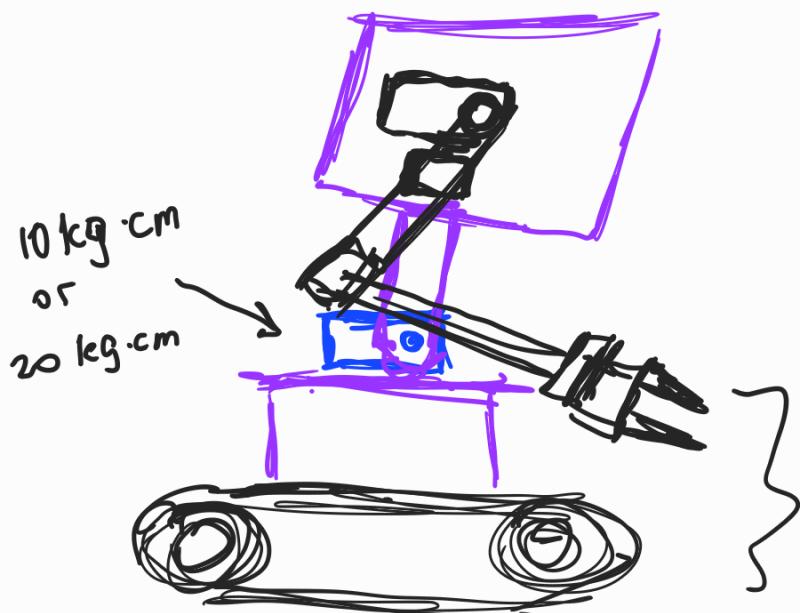
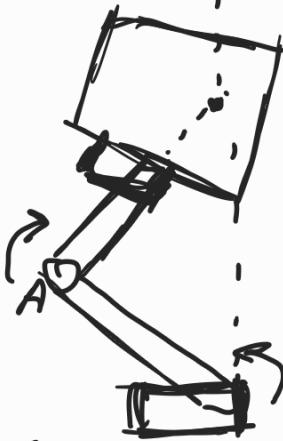
$$\frac{L_2}{\cos \theta} = \frac{L_1}{\cos \phi}$$

$$\approx \frac{\frac{L_2}{\cos \theta}}{1 - \frac{\theta^2}{2}} = \frac{\frac{L_1}{\cos \phi}}{1 - \frac{\phi^2}{2}}$$

$$\phi = \frac{\sqrt{-2L_1 + 2L_2 + L_1 \theta^2}}{\sqrt{L_2}}$$

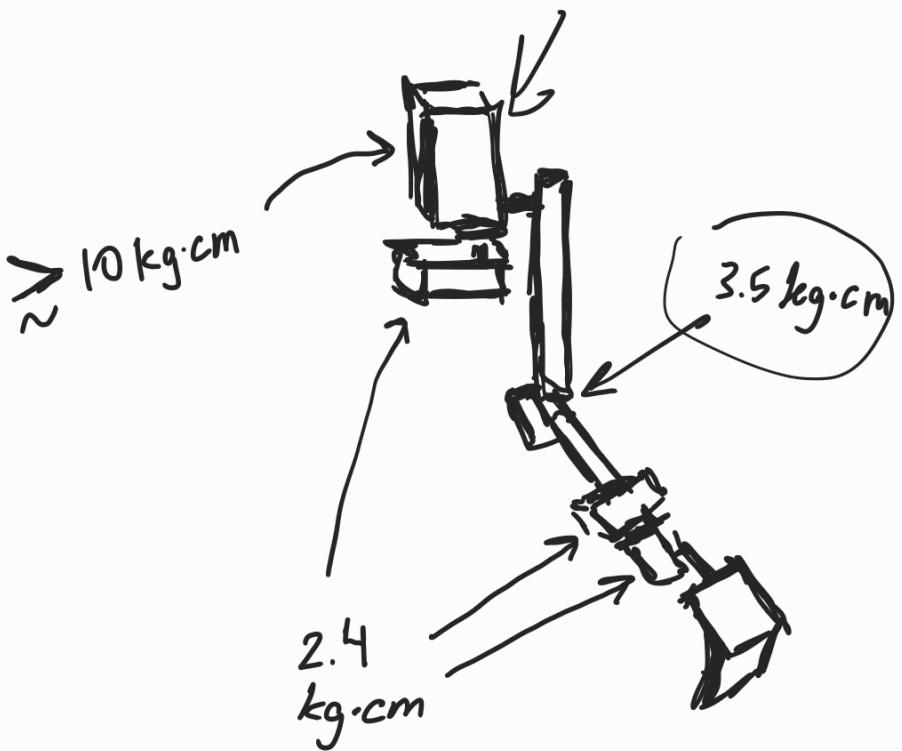


Need kind of some reversal at joint A if using pulleys + belt

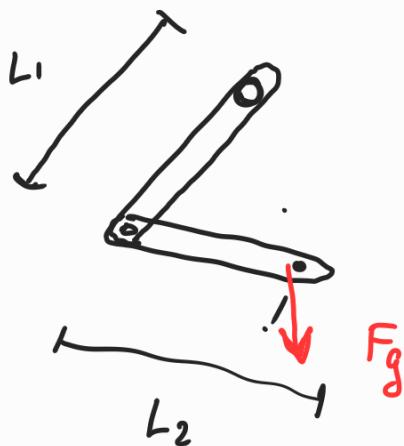


No claw/gripper :

5 dof



- 3 10-20 kg·cm servos
- 6 2.4 kg·cm servos
- 2 3.5 kg·cm servos



$$\frac{37.2 \text{ g}}{1000} \cdot 10 \text{ cm} \approx 0.372 \text{ kg}\cdot\text{cm}$$

Holding a phone $\Rightarrow \approx 2.2 \text{ kg}\cdot\text{cm}$

Add torsion spring to offset normal arm weight a bit?

