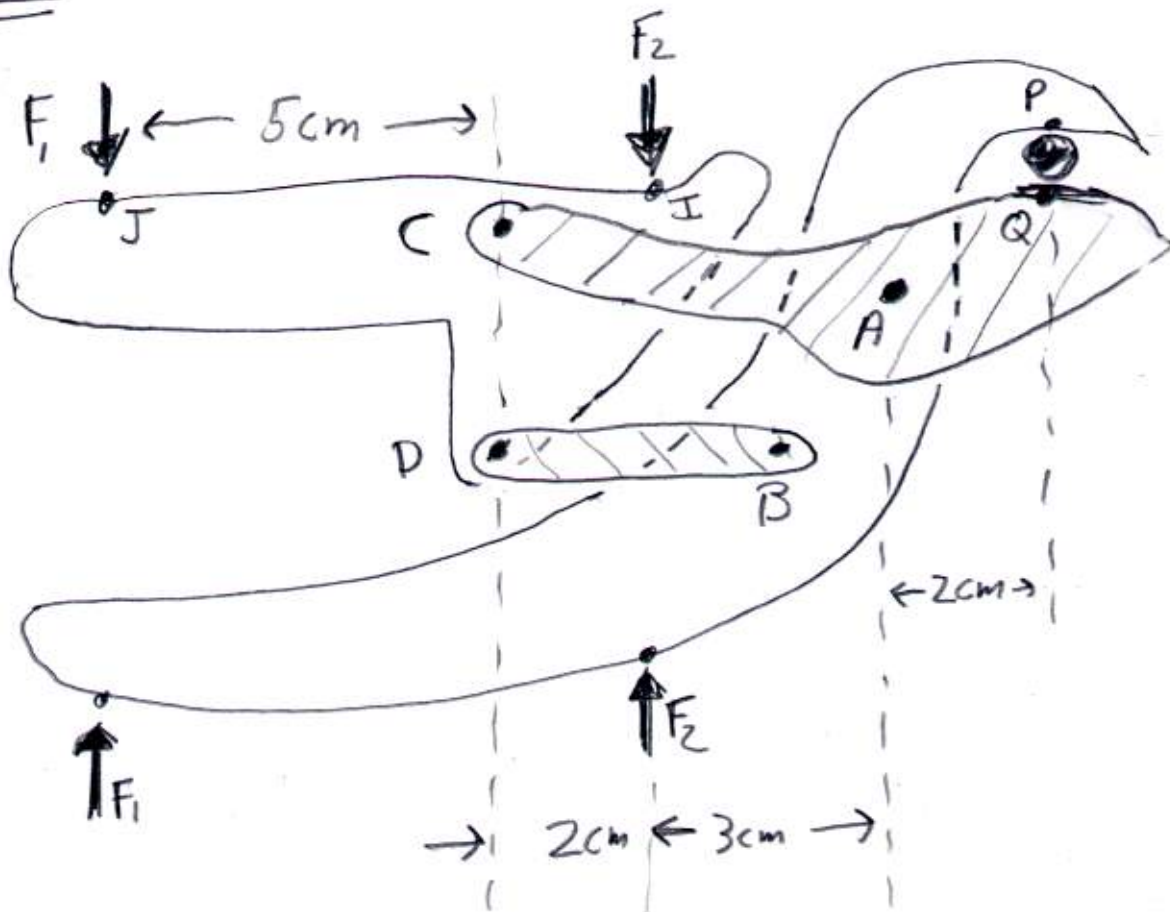
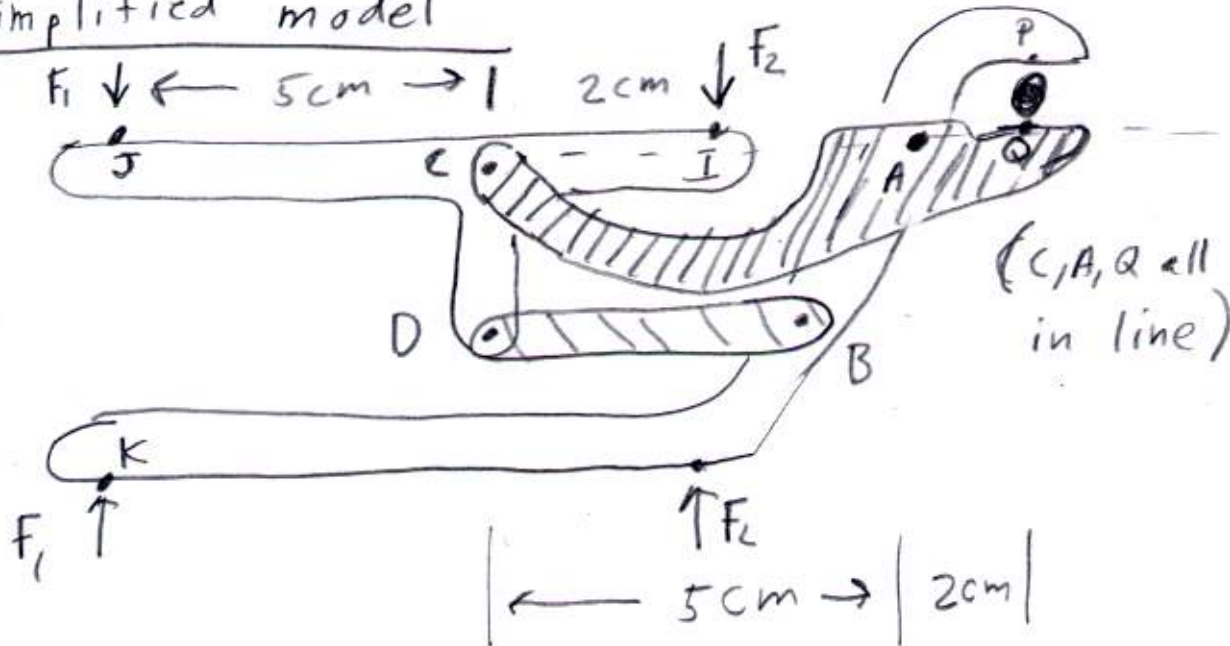


RP 6.3.11

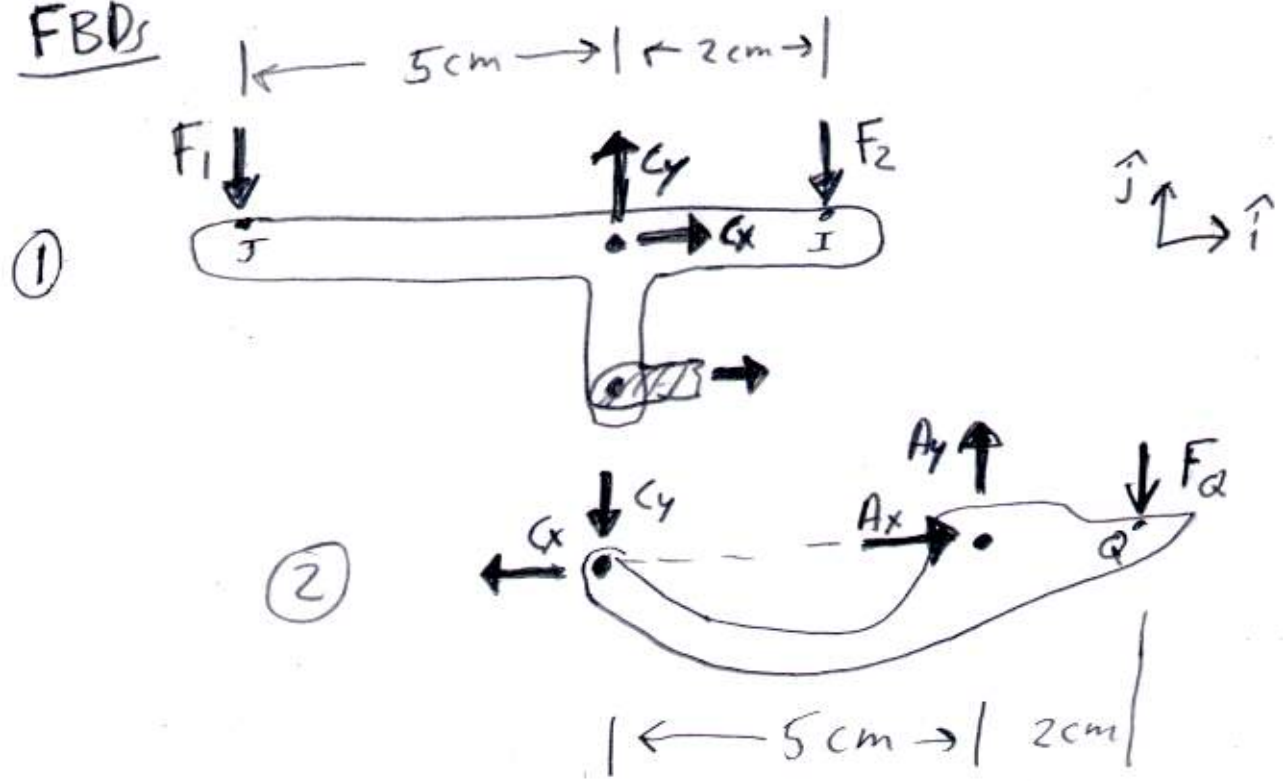


Simplified model



- Only  $F_1$  applied then what?
- "  $F_2$  " " " " ?
- What if DB eliminated but CAQ welded to JCI?
- Compare

FBDs



①,  $\sum F_y = 0 \Rightarrow C_y = F_1 + F_2$

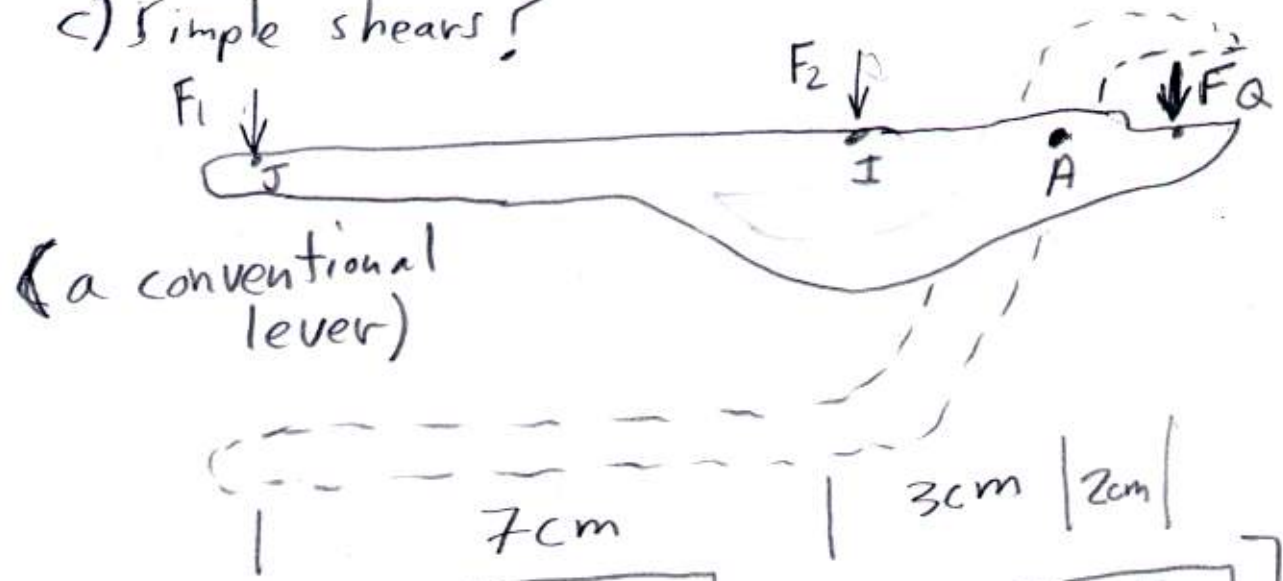
②,  $\sum \tau_A = 0 \Rightarrow F_Q = \frac{5}{2} C_y$

a)  $F_2 = 0, F_1 = 50N \Rightarrow F_Q = 125N$

b)  $F_1 = 0, F_2 = 50N \Rightarrow F_Q = 125N$

Force amplification ind. of location of hand force.

c) Simple shears?



$\sum \tau_A = 0 \Rightarrow F_1 \text{ only} \Rightarrow F_Q = \frac{10}{2} F_1$ ,  $F_2 \text{ only} \Rightarrow F_Q = \frac{3}{2} F_1$

Depends on force location

Parallel mechanism gives equal motions of I & J so equal force amplification.