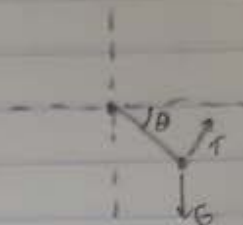


HW 2

There are 3 constants to find: G , B , I .
 I left commented code that better shows how
 I got my values

G : $\ddot{\theta} = 0$ $\dot{\theta} = 0$. $G = \tau / \cos \theta$
 Simply raise the arm with
 a torque and calculate.



B : $\ddot{\theta} = 0$

Compensate for gravity to eliminate all values except
 for B . $\tau + G \cos \theta = I \ddot{\theta} + B \dot{\theta} + G \cos \theta$

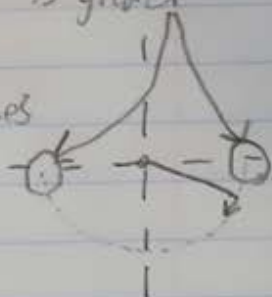
Set a torque and solve for B . $B = \tau / \dot{\theta}$
 I had to get an average of B because of
 resonance

I : $\tau = 0$

use G and acceleration when the acceleration is greatest

$\tau + B \dot{\theta} = I \ddot{\theta} + B \dot{\theta} + G \cos \theta$. $I = -G \cos \theta / \ddot{\theta}$

similar to before. get the average of values



$$I_D = 10019.06210$$

$$G = 4.16427960$$

$$B = 0.17080023$$

$$I = 0.08825050$$

