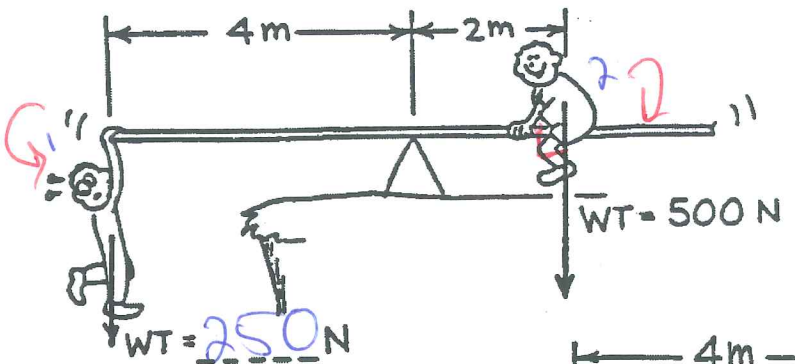
2. Complete the data for the three seesaws in equilibrium.



$\tau = F_1 d$

$\tau_{net} = \tau_1 - \tau_2 = 0\ Nm$

$\tau_1 = \tau_2$

$F_1 d_1 = F_2 d_2$

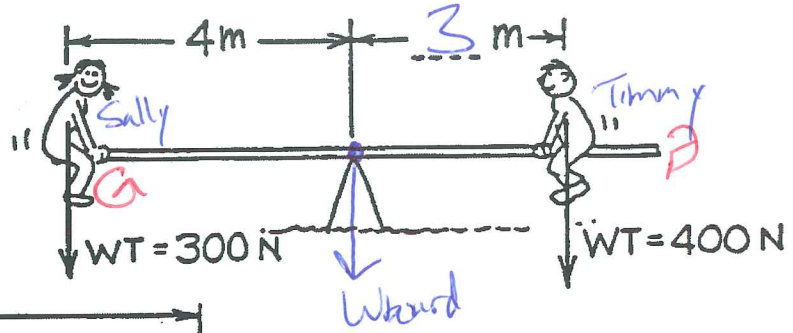
$F_1 (4m) = (500N)(2m)$

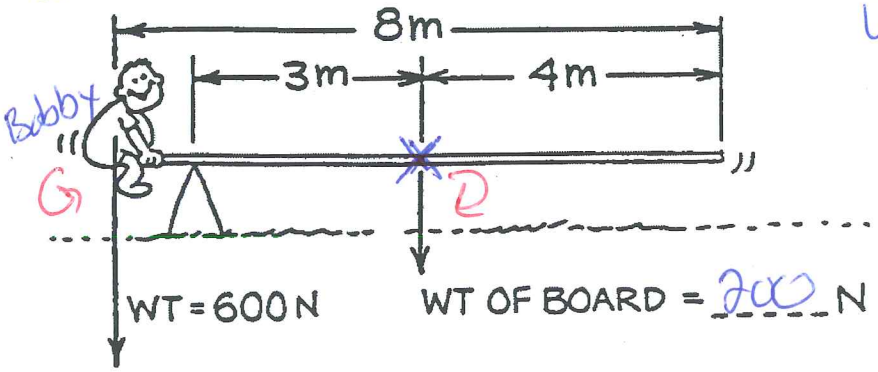
$(4m) \quad (4m)$

$\tau_{aw} = \tau_{aw}$

$\tau_{sally} = \tau_{Timmy}$

$(300N)(4m) = (400N)d$





$\tau_{aw} = \tau_{aw}$

$\tau_{bobby} = \tau_{board}$

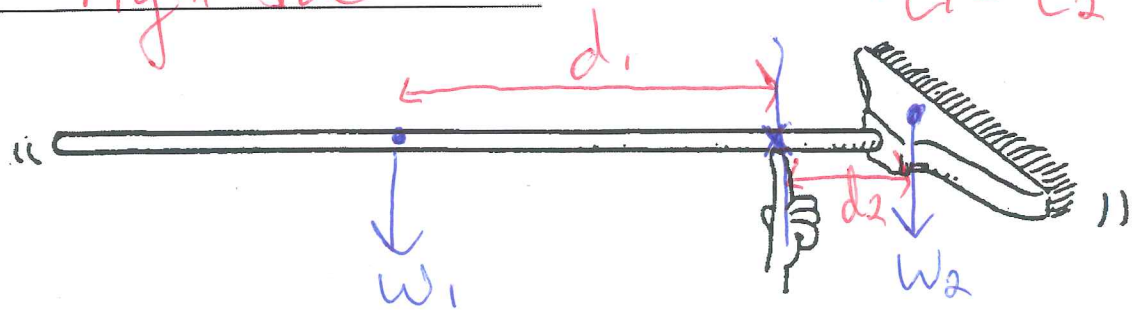
$(600N)(1m) = W_b(3m)$

$3m) \quad (3m)$

3. The broom balances at its CG. If you cut the broom in half at the CG and weigh each part of the broom, which end would weigh more?

right side

$\tau_1 = \tau_2$



Explain why each end has or does not have the same weight? (Hint: Compare this to one of the seesaw systems above.)

$\tau_1 = \tau_2$, b/c not rotating

$W_1 d_1 = W_2 d_2$