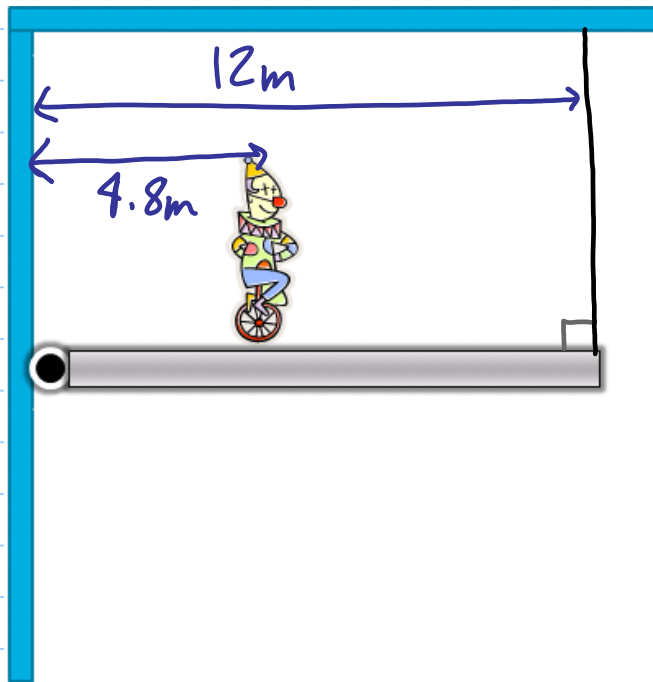


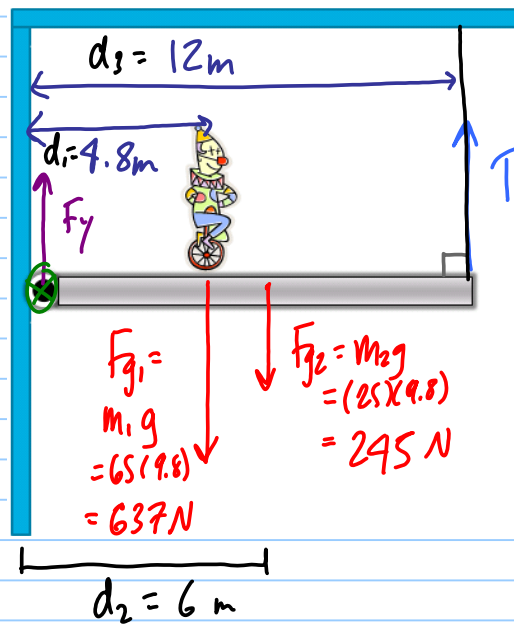
Quiz 2a

Note Title

02/11/2011

A 65 kg clown rides along a 25 kg beam. What is the tension in the rope at the end of the beam and the supporting force provided by the hinge?





$$\tau_c = \tau_{cc} \quad \checkmark$$

$$F_{g1} d_1 + F_{g2} d_2 = T d_3 \quad \checkmark$$

$$T = \frac{F_{g1} d_1 + F_{g2} d_2}{d_3} = \frac{(637)(4.8) + (245)(6.0)}{12}$$

$$= \boxed{377\text{N}} \quad \checkmark$$

$$\sum F_y = T + F_y - F_{g1} - F_{g2} = 0 \quad \checkmark$$

$$F_y = F_{g1} + F_{g2} - T$$

$$= 637 + 245 - 377$$

$$= \boxed{505\text{N}} \quad \checkmark$$