

PP/485

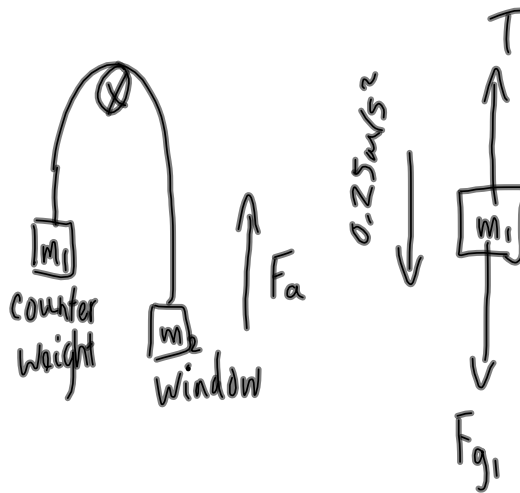
22.

$m_1 = 3.0 \text{ kg}$

$m_2 = 4.5 \text{ kg}$

$a = 0.25 \text{ m/s}^2$

$F_a = ?$



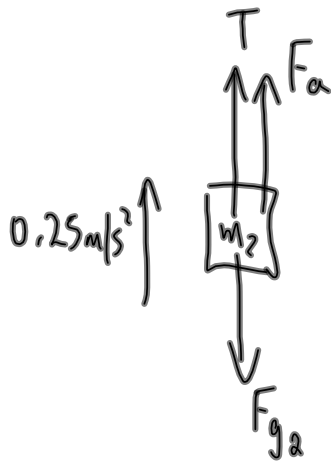
$\vec{F}_{net} = m\vec{a}$

$F_{g1} - T = m_1 a$

$(3.0 \text{ kg})(9.8 \text{ m/s}^2) - T = (3.0 \text{ kg})(0.25)$

$29.43 \text{ N} - T = 0.75$

$T = 28.68 \text{ N}$



$\vec{F}_{net} = m\vec{a}$

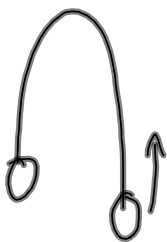
$T + F_a - F_{g2} = ma$

$F_a = ma + F_{g2} - T$

$F_a = (4.5 \text{ kg})(0.25 \text{ m/s}^2) + (4.5 \text{ kg})(9.8 \text{ m/s}^2) - 28.68 \text{ N}$

$F_a = 16.59 \text{ N}$

$F_a = 17 \text{ N}$



Determining g on an Incline

- Preliminary Questions
- Data/Observations
 - Sample graphs (d-t, v-t with slope) - identify the trial.
 - data table
- Analysis
 - 1 + 2 \rightarrow show ^{sample} calculation
 3. Insert GA graph (show LOBF + extrapolated value)
 4. Write equation \rightarrow use appropriate variables
 5. State the acc when $\sin \theta = 1$
 6. % error = $\frac{\text{exp} - \text{true}}{\text{true}} \times 100\%$
 - 7 + 8 N/A
 9. is extrapolation valid?
- Extensions 1 + 2
 - 3 (Adv) - estimate a value for μ_k

DUE Thurs (Mar 28)