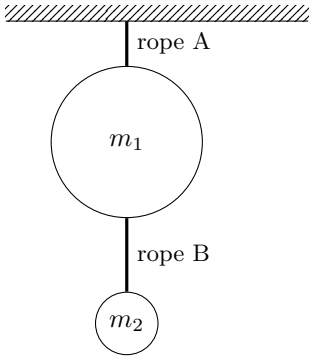
Name: Date: Period:

Multi-Body Problem (Consolidation)

Two masses are suspended at rest. Assume that $m_1 = 5.2$ kg and $m_2 = 1.7$ kg.



(a) Calculate the tension on each rope.

(b) Now you've detached rope A and are accelerating the system upward at a rate of $0.5\,\mathrm{m/s^2}$, what would be the tensions on both ropes?

Two boxes have masses $m_1 = 20$ kg and $m_2 = 10$ kg and are sitting on a frictionless surface connected by a massless cord. If they are pulled with an applied force of $F = 50$ N, calculate (a) their acceleration and (b) the tension in the cord connecting them.