## Circular Motion Problem

Name: $\qquad$ Date: $\qquad$

A block of mass $m_{1}=3 \mathrm{~kg}$ is attached to a rope of length $L_{1}=8 \mathrm{~cm}$, which is fixed at one end to a table. The mass moves in a horizontal circle supported by a frictionless table. A second block of mass $m_{2}=6 \mathrm{~kg}$ is attached to the first mass by a rope of length $L_{2}=10 \mathrm{~cm}$. The mass also moves in a circle, as shown in Figure 2.64. If the masses take 5 seconds to make 2 revolutions, calculate the tension in each rope (try and get a general solution before putting in the numbers, also assume all ropes are massless).


