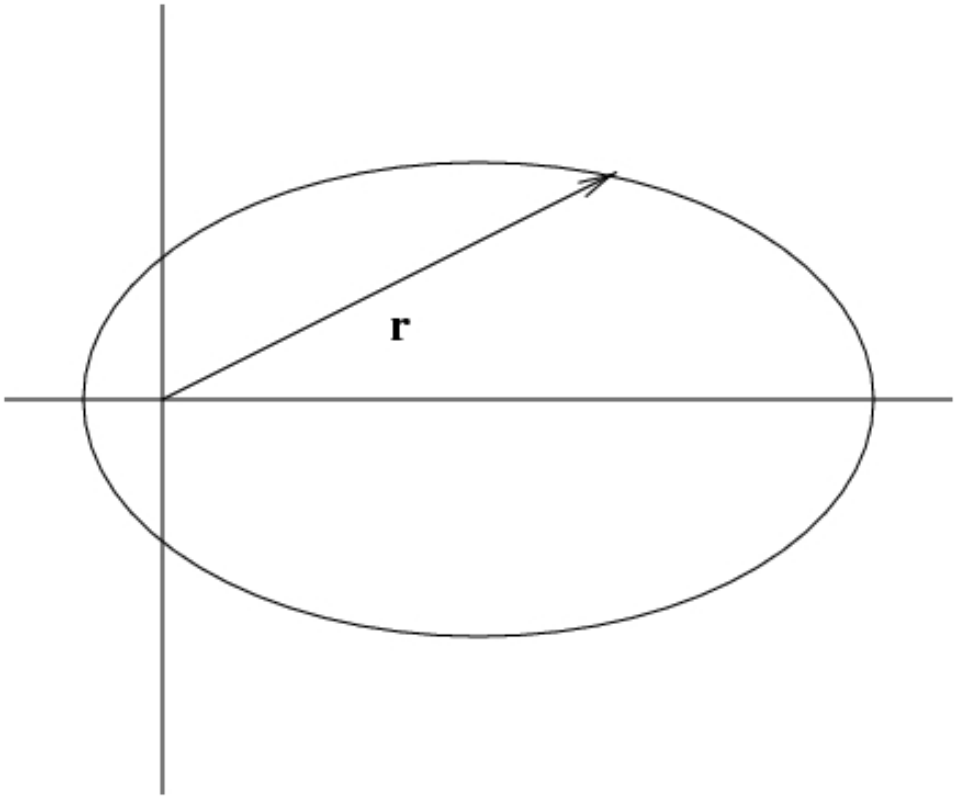
1 Undo Formulas for Center of Mass (Geometry)

(Sketch limiting cases) Purpose: For two central force systems that share the same reduced mass system, discover how the motions of the original systems are the same and different.

The figure below shows the position vector $\vec{r}$ and the orbit of a "fictitious" reduced mass μ.



(a) Suppose $m_1 = m_2$, Sketch the position vectors and orbits for m_1 and m_2 corresponding to $\vec{r}$. Describe a common physics example of central force motion for which $m_1 = m_2$.

(b) Repeat, for $m_2 > m_1$.