Exam 4B, Fall 2005: Problem 1 (Particle WE)

1. ( 25 points) A 2 kg slider moves along a smooth curved rod in a vertical plane. Attached to it is a massless spring ( $k=500 \mathrm{~N} / \mathrm{m}$, unstretched length $=0.4 \mathrm{~m}$ ). If $\mathrm{v}_{1}=1 \mathrm{~m} / \mathrm{s}$, please determine $\mathrm{v}_{\mathbf{2}}$.


Spring: k=500 N/m
Unstretched length $=.4 \mathrm{~m}$


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