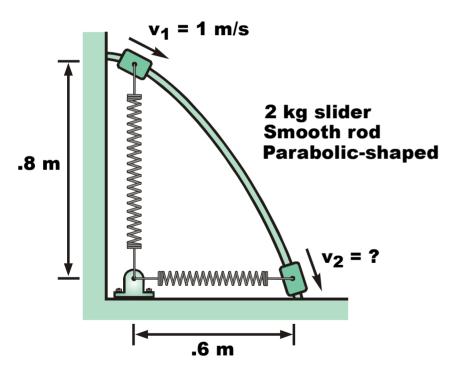
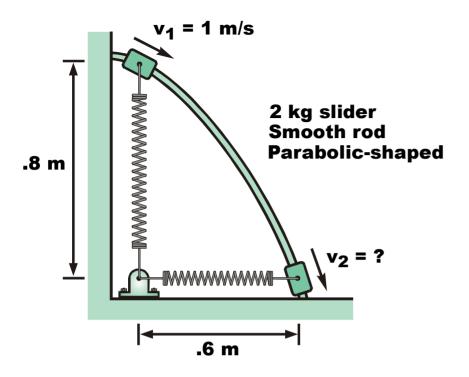
1. (25 points) A 2 kg slider moves along a smooth curved rod in a vertical plane. Attached to it is a massless spring (k = 500 N/m, unstretched length = 0.4 m). If  $v_1 = 1 \text{ m/s}$ , please determine  $v_2$ .



Spring: k = 500 N/m

Unstretched length = .4 m



Spring: k = 500 N/m Unstretched length = .4 m