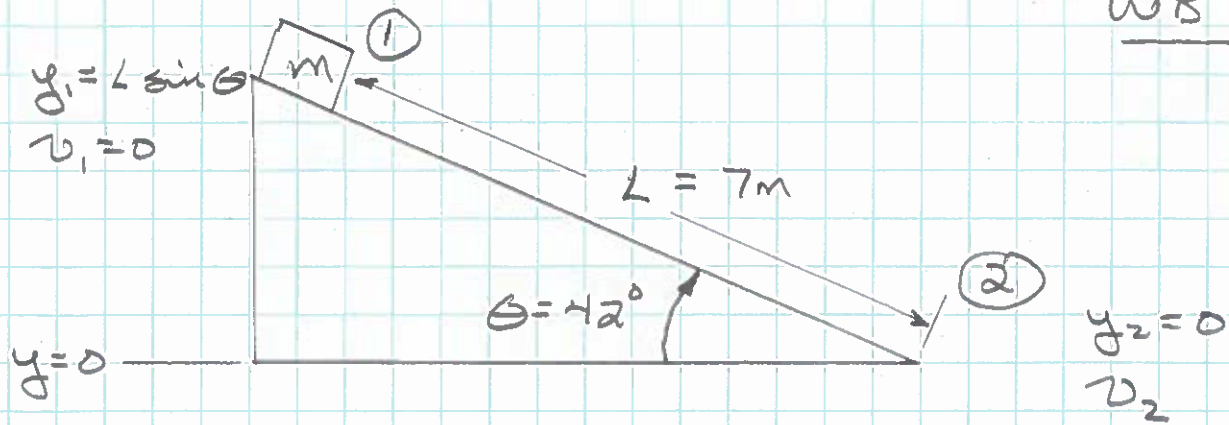


WB 9/10-6
1



Conserved energy 1 \rightarrow 2:

$$\Delta E_{\text{mech}} = \Delta K + \Delta U_g = 0$$

$$\frac{1}{2} m (v_2^2 - v_1^2) + mg(y_2 - y_1) = 0$$

$$\frac{1}{2} v_2^2 - g L \sin \theta = 0$$

So,
$$v_2 = \sqrt{2 g L \sin \theta}$$

$$\underline{v_2 = 9.58 \text{ m/s}}$$