How do you solve a problem for frictional work on an incline with only the mass, angle, beginning and end velocity and height?

Solution

According to the energy conservation law:

$$K_1 = A_{Fr} + K_2 + E_p$$

$$\frac{mV_1^2}{2} = A_{Fr} + \frac{mV_2^2}{2} + mgh$$

$$A_{Fr} = \frac{mV_1^2}{2} - \frac{mV_2^2}{2} - mgh$$