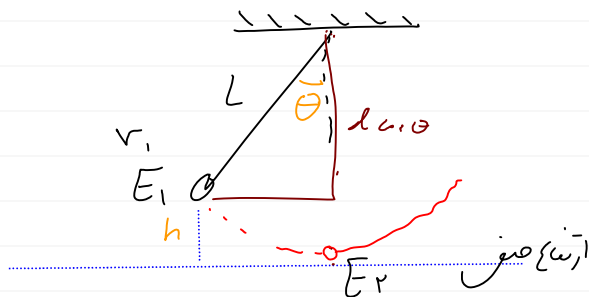




$$u_1 + k_1 = u_2 + k_2 + |W_f|$$



$$\frac{1}{2} m v^2$$

$$W = F d \cos \theta$$

$$W_T = k_2 - k_1$$

$$W = m g h$$

$$u_1 + k_1 = k_2 + |W_f|$$

$$W_{mg} = m g \Delta h$$

$$m g h_1 + \frac{1}{2} m v_1^2 = \frac{1}{2} m v_2^2 + |W_f| \quad E = u + k$$

$$h = L - L \cos \theta$$

$$E_1 = E_2 + |W_f|$$