Problem 3

Determine

The speed of the spheres after 4 seconds if they start from rest

\[ (H_2)_1 + \sum_{t=1}^{+2} M_2 dt = (H_2)_2 \]

\[ 0 + \int_0^4 (0.5 + 0.8) \, dt = (0.6 \, ft) \left( \frac{5 \, lb}{32.2 \, ft/s^2} \right) (4) \, v_2 \]

\[ \left( 0.25 + 2 + 0.8 + \right) \int_0^4 = (0.6) \left( \frac{5}{37.2} \right) 4 \, v_2 \]

\[ v_2 = 19.3 \, ft/s \]