**a:** displacement in \( x \) from \( A \) = 

\[ x = 0.5 \]

**b:** \( W_f = \) (on incline)

**c:** \( W_f = \) (on flat surface)

\( k = 600 \text{ N/m} \)

\( \dot{r} = 2 \text{ kg} \)

\( 3 \text{ m} \)

\( 60^\circ \)

\( \mu = 0.3 \)

\( \mu = 0.3 \)

\( \text{flat surface} \)

\( \text{given:} \quad W_{spring} = \frac{1}{2} k x^2 = \frac{1}{2} m v^2 \)
b: \( W_f = \) (on incline)

\[ k = 600 \text{ N/m} \]

\[ W_{\text{spring}} = \frac{1}{2} k x^2 = \frac{1}{2} Mv^2 \]

\[ W_f = v_f^2 - 2ad \]

\[ F_{\text{net}} = F_f = \mu F_n = \mu mg \]

\[ \text{displacement in } x \text{ from } A = \]

\[ 2 \text{ kg.} \]

\[ x = 0.5 \]

\[ \mu = 0 \]

\[ u = 0.3 \]

\[ \theta = 60^\circ \]