

### Prelab 13

Imagine a spring launcher which will propel a cart along a horizontal incline. The launcher has a spring with a force constant of  $50\text{N/m}$ . The mass of the cart is  $0.8 \pm 0.005\text{ kg}$ . When the spring is compressed  $5\text{ cm}$ , and released, the cart travels  $121 \pm 1\text{ cm}$  on the horizontal track. When the track is inclined at  $4$  degrees, how far up the incline will the cart travel?