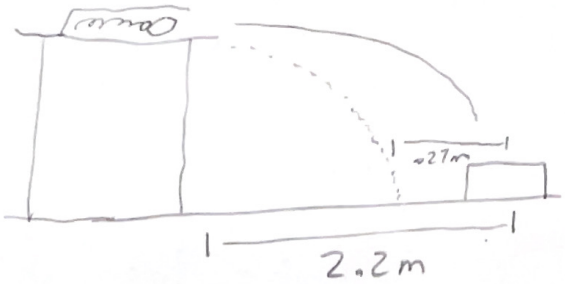
Gaige McMichael

Question 9 SW 1

Spring

$\Delta x = .011\,m$

.27 m short



shot 1: $2.2\,m - .27\,m$

$\Delta x = 1.93\,m$

spring

$PE = \frac{1}{2} k x^2$

$F = -kx$

$\Delta x = v_i t + \frac{1}{2} a t^2 \quad a = 0$

$\frac{1}{2} k x^2 = m v^2$

shot 2: $\Delta x = 2.2\,m$

$PE = \frac{1}{2} k (.011)^2$

$\frac{1.93}{.011} = \frac{2.2}{x}$ ~ proportional?

$x = .0125\,m$

$= 1.25\,cm$