SPH4U

Spring Energy Example Problem

Name: _____ Date: _____

An angry bird is going to launch himself from a compressed, ideal, spring horizontally off of a cliff and directly onto an unsuspecting pig below. Assume a frictionless environment and no air resistance.

a) During calibration of the spring the angry bird performed the following calibration: Angry bird compressed himself by 7 cm and then released himself. He measured his speed at 5 cm/s when the spring had been uncompressed by 6 cm (was still compressed by 4 cm). Calculate the spring constant of the spring.

b) Given the dimensions in the diagram below, *calculate the compression required in the spring so that the angry bird hits the pig in the location indicated* in the diagram.