**5.3: Radical Equations (Day 2)**

**Objectives:**

* Modeling and solving problems with radical equations

Refer to the diagram of 3 metre sticks shown below. If the diagonal metre stick moves ***v***cm down and ***h***cm away from the wall, determine the dimensions of the right triangle. ***See pg 295 textbook***.







1. If v = 10 cm, h = \_\_\_\_\_\_\_\_\_\_\_\_.



1. If v = 20 cm, h = \_\_\_\_\_\_\_\_\_\_\_\_.



1. If v = 40 cm, h = \_\_\_\_\_\_\_\_\_\_\_\_.



**Example 1)** What is the speed, in m**/**s, of a 0**.**4-kg football that has 28**.**8 J of kinetic energy? Use the kinetic energy formula, *E****k***= *mv***2**, where *E****k***represents the kinetic energy, in joules; ***m***represents mass, in kilograms; and ***v***represents speed, in m**/**s.

