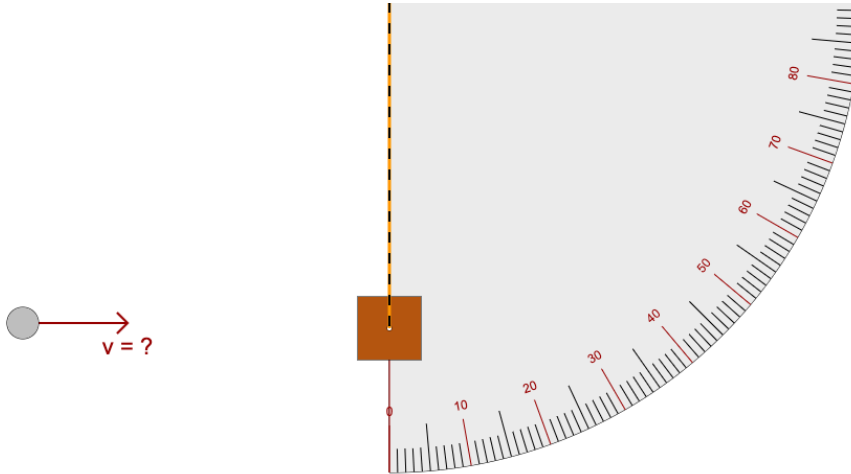


Angle of Ballistic Pendulum

Step 1: Label the ball and the block with their masses in kg. Also label the string with its length and put the value of the gravitational field somewhere in the picture.



Step 2: Use conservation of momentum to find the speed of the ball/block combination immediately after they collide. Show your work neatly below.

Step 3: Use conservation of energy to find the height to which the box/ball will reach before momentarily coming to rest.

Step 4: Based on that change in height, find the maximum angle of displacement. Show your work below and put the answers in your program to see if you did everything correctly.