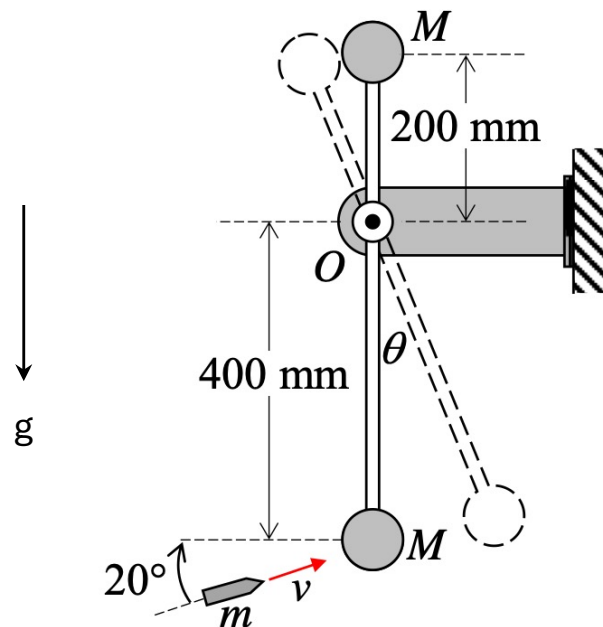**Homework H.4.Q**

Given: A bullet strikes the lower particle of a stationary pendulum with a speed of v. After impact, the bullet sticks to the particle.

Find: Determine:
(a) The angular speed of the pendulum immediately after impact;
(b) The maximum rotation angle through which the pendulum swings after impact.

Use the following parameters in your analysis: $v = 100$ m/s, $m = 50$ g and $M = 4$ kg.