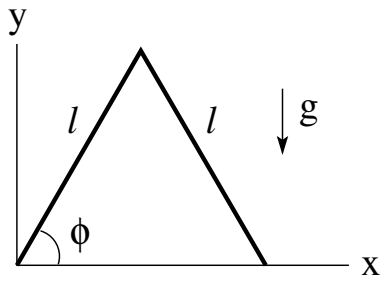
[mex256] Falling flat

Two rods of mass m and length l each are connected at one end by a hinge. The opposite end of one rod is hinged to the origin of the coordinate system. The opposite end of the other rod is free to slide along the horizontal axis. Starting from rest at initial angle $\phi = 60°$ the triangular configuration collapses under the influence of the gravitational field g. Find the speed v of the hinge that connects rods when it hits the horizontal axis.



Solution: