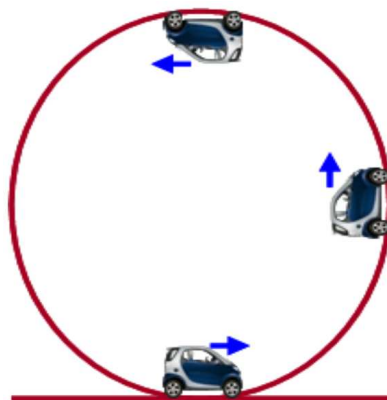


1. A car of mass $m = 400.0$ kg is driving a “loop-the-loop” of radius 24.0 m at constant speed. What is the minimum speed required such that the car does not fall off the loop at the top position?



2. A tetherball (see picture) with mass 1.0 kg rotates in a perfect circle with a period of 3.0 seconds. The length L of the massless cord connecting the ball to the pole is 2.5 m. What angle θ does the cord make with respect to the pole?

