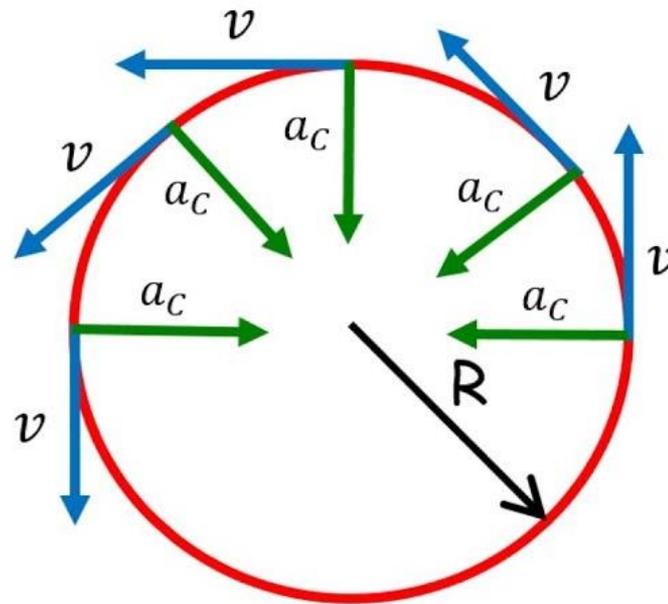


Centripetal acceleration

When moving along a circular path of radius R , with constant speed v , an object has acceleration directed towards the center, called Centripetal Acceleration:

$$a_c = \frac{v^2}{R}$$



Homework

The Figure shows an Olympian throwing a metal ball attached to a wire (the sport is called hammer throw). Assume that the ball of mass 4 kg is moving along a circular trajectory of radius 1 m, at speed 20 m/s.

- Find the tension of the wire. You may neglect the presence of gravity.
- Can you justify why gravity may be neglected?

