

A hawk flies in a horizontal arc of radius 12.0 m at constant speed 4.00 m/s . (a) Find its centripetal acceleration.

(b) It continues to fly along the same horizontal arc, but increases its speed at the rate of 1.20 m/s^2 . Find the acceleration (magnitude and direction) in this situation at the moment the hawk's speed is 4.00 m/s .