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1. An artificial satellite orbiting the Earth in a very thin atmosphere loses its energy gradually due to dissipation against atmospheric resistance, however small. Why then does its speed increase progressively as it comes closer and closer to the earth?

Sol. The total energy of artificial satellite remains constant. Thus when it approaches the earth the distance between them decreases. This results in a decrease in the potential energy of the satellite. By energy conservation, the kinetic energy of satellite increases and so does the velocity.