Keystone: Chapter 6

A horizontal spring-mass system has low friction, spring stiffness 200 N/m and a mass 0.4 kg. The system is released with an initial compression of the spring of 10 cm and an initial speed of the mass of 3 m/s.

1) What is the maximum stretch during the motion?

2) What is the maximum speed during the motion?

3) Now suppose that there is energy dissipation of 0.01 J per cycle of the spring-mass system. What is the average power input in watts required to maintain a steady oscillation?