P11 - 7.1 - Gravitational Force F_g

What is the gravitational force on a 10 kg object on earth? Use both the gravitational constant and Newton's second law course is equal to mass times acceleration.

What is the gravitational force on a 200 kg object on earth?

What is the gravitational force on at 2000 kg object satellite hovering above the earth's surface at 20,000 m?

What is the gravitational force between two pool balls of 1 kg 1 m apart

P12 - 7.5 - Circle Car HMK

It takes 40 seconds for a car to drive around a circle with a Radius of 12 m.
Find the Velocity of the car.
Find the Acceleration of the car.
If the mass of the car is 1200 kg Find the Centripetal Force on the car.

It takes 30 seconds for a car to drive around a circle with a Radius of 20 m.
Find the Velocity of the car.
Find the Acceleration of the car.
If the mass of the car is 1800 kg Find the Centripetal Force on the car.

P12 - 7.9 - Pendulum String HMK

A 1.8 kg mass on a 0.6 m string is spun around a circle with a period T of 0.8 s.
 Find the tension in the string when the object is at the top and bottom of the circular path.

What is the minimum speed of the object at the top of the circular path to remain in circular motion?

A 5 kg mass on a 1.4 m string is spun around a circle with a period T of 1.2 s.
 Find the tension in the string when the object is at the top and bottom of the circular path.

What is the minimum speed of the object at the top of the circular path to remain in circular motion?