P12 - 7.1 - Circular Motion 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 - 7.2 - Circular Ball String Motion 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?