

CIRCULAR MOTION PROBLEMS

Name _____

1. A sock stuck to the inside of the clothes dryer spins around the drum every 2.0s at a distance of .50m from the center of the drum. A) What is the socks linear speed? B) If the drum were twice as large, what would the linear speed then be? (DO NOT do any calculations for Part B!)
2. A .50kg rock is tied on a 1.0m string which has a breaking force of 990N. If the string breaks, what is the speed of the rock?
3. Roxanne is making a strawberry milkshake in her blender. A tiny .0050kg piece of berry is rapidly spun around the inside of the container with a speed of 14m/s, held by a centripetal force of 10.N. What is the radius of the blender?
4. A cement mixer of diameter 5.00m turns with a frequency of .0200Hz. What is the centripetal acceleration acting on an ant on the inside wall?

