STANDARDS: HS.P.C.57 _____ HS.P.C.58_____

Name: _____ Period: _____ Date: _____

HS.P.C.57, HS.P.C.58 Assessment

HS.P.C.57	I can calculate the magnitude and direction of the acceleration for a particle experiencing uniform circular motion.	

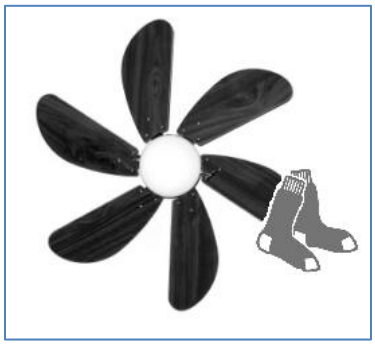
1. A ceiling fan spins at a rate of 30 rotations in 60 seconds. If a sock is stuck on the end of the 0.45 meter blade…

   a. What is the circumference of the circular path the sock travels?

   b. What is the tangential speed that the sock travels as it is spun around?

   c. What is the centripetal acceleration of the sock as it is spun around?

   d. Draw the direction of the **acceleration** the sock experiences on the picture below:



HS.P.C.58	I can use Newton's 2nd Law to solve problems for a particle experiencing uniform circular motion	

2. A 2000 kg car is traveling on a circular track with a radius of 150 meters at a constant speed of 25 m/s.

   e. What is the centripetal acceleration of the car?

   f. What is the centripetal force acting on the car?