

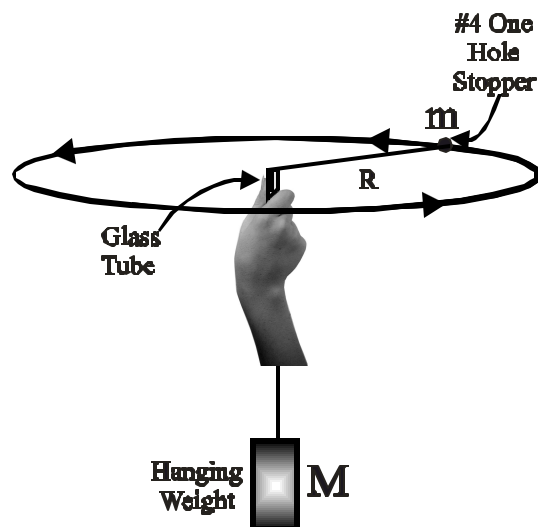
NAME \_\_\_\_\_  
PERIOD \_\_\_\_\_

## PHYSICS QUIZ #6D CENTRIPETAL ACCELERATION

1. You perform a lab where a rubber stopper, which has a mass of 15.5 grams, is spun in a horizontal circle as shown to the right. The circle is measured to have a radius of 125.0 centimeters. A mass of  $m = 85.0$  grams is hanging from the end of the string.

a. What is the magnitude of the centripetal force acting on this stopper? [3 pts]

b. Draw an arrow in the diagram to the right indicating the direction of the centripetal acceleration of the stopper when located at position P in the diagram? [3 pts]



c. What is the speed of this rubber stopper? [3 pts]

d. How long will it take for this stopper to make 15 complete revolutions? [3 pts]

2. On the axes to the right sketch the graph which represents  $y = k$ ? [3 pts]

