

Name: _____ Date: _____

Centripetal Acceleration Activity – Accelerometer Worksheet

1) What is the equation used for determining centripetal force and describe all components of that equation?

2) What is the equation used for determining centripetal acceleration and describe all components of that equation?

3) How does the accelerometer work? Please use pictures to describe how it works (use the backside of this sheet for drawing)?

4) A round basket ball with a circumference of 50 cm is balanced on the tip of a finger and is spinning at a rate of 15 rev/sec. What is the centripetal acceleration of a point of the basket ball?

5) A half-kilogram around gum-ball rests on the edge of a plate with an area of 1.5 sq. meters. In order to have a centripetal force of 100 Newtons, how many revolutions per second must the gum-ball make in rads/ sec?

6) If accelerometer is measuring all three axes, then would the change in g be the same across all three axes? Why or why not?
