Name

Date

Period

**Review for Projectile Motion**

1 Draw the diagram/graph with a tennis ball projected at 5 m/s with a 20 angle. Label the x-axis, y-axis, horizontal axis, vertical axis, angle (theta), three names to the sides of your triangle (hypotenuse, adjacent, and opposite)

2 Draw the three types of projectile motion. What is the only thing that makes projectile motion work?

3 Draw two different views for relative motion. Use the example of a person on a bicycle tossing a ball into the air and another person watching.

4 A farmer plows his field 15 m north, then 5 m west, then 4 m south. Find the farmer’s displacement. (\*Use the Pythagorean Theorem)

5 A person hits a golf ball 25 m horizontally. The ball had an angle of 45 above the horizontal. If the ball travelled at 60 m/s calculate: (\*Identify your variables, write your equation, plug in your variables, add units, circle final answer\*)

5a The horizontal and vertical component of the velocity of the ball. (cos 0 = adj / hyp) and (sin 0= opp / hyp)

5b How long it takes the ball to hit the ground (vx= x / t)

5c The maximum height of the ball y= vif + 0.5 (ag) (t)2

6 Two people are firing Nerf balls into the air. Person A’s Nerf ball travels 13.2m at a 90 angle. Person B’s Nerf ball travels 21.1m in length and has an angle of 70 degrees. Calculate:

6a The horizontal and vertical components of Person A’s Nerf ball. cos 0= adj/hyp AND sin 0= opp/hyp

6b The horizontal and vertical components of Person B’s Nerf ball. cos 0= adj/hyp AND sin 0= opp/hyp