

Drop Shot Lab

1. State your hypothesis if you believe that a ball with an initial velocity in the x-axis will hit the ground before, after, at the same time an object released into free-fall strikes the ground. Ex: If _____, then_____.
2. Why do you think this will happen?
3. Why is it important to make sure the ball is dropped from the **same location** on the ramp every time?
4. At what instant does the ball become a “**projectile**” and enter “**free fall**”?

5. At the moment the ball leaves your hand towards the ground, what is the initial vertical component of velocity (V_{iy})?

6. What were your results? Did the results prove or disprove your hypothesis?

7. Are the X and Y axis dependent or independent of each other?

8. Now with your current knowledge of projectile motion, describe what caused the objects to act in this particular way in two or three sentences?

9. Draw a diagram of both objects falling on your white board and show the vectors affecting it.

Teacher initials_____