PHYSICS IN MOTION
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Unit 2G
Horizontally Launched Projectiles
Note-Taking Guide and Questions to Consider

Name:

Date:

Main Ideas, Key Points, Questions:

After watching the video segment, write down key points, main ideas, and big questions.

Objective(s):

- ***Indicate, both qualitatively and quantitatively, how horizontal and vertical components of motion are independent of one another.***
- ***Calculate the range and time of flight for a horizontally launched projectile.***

Notes:

During the video segment, use words, phrases, or drawings to take notes.

Summary:

After watching the video segment, write at least three sentences explaining what you learned.
You may ask yourself: "If I was going to explain this to someone else, what would I say?"

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Answer the following.

1. **What does it mean for an object to travel in two dimensions?**

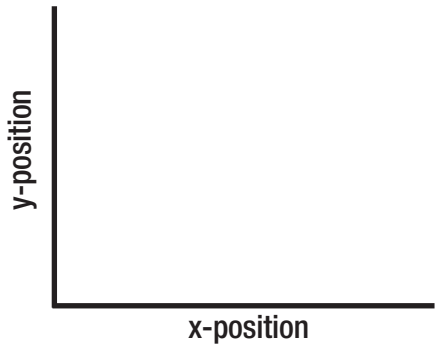
2. **Describe what happens to the horizontal component of velocity while an object is in the air.**

3. **If an object travels at a constant velocity, how does its average velocity compare to its instantaneous velocity throughout the trip?**

4. **Which equation will you use to make calculations about a projectile's horizontal displacement (i.e., range) and horizontal velocity?**

5. **What three equations can you use to make calculations about a projectile's vertical motion?**

6. **Sketch the motion of a horizontally launched projectile on the axis below:**



7. **Two balls are released from the same height. One is dropped and the other is horizontally launched. Why do they reach the ground at the same time?**