Unit 2G
Horizontally Launched Projectiles

Note-Taking Guide and Questions to Consider

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?