

Projectile : moving frame of reference

Questions

1. If the body is projected from the stationary frame of reference, is the vertical component of velocity of the projectile same from both frames of reference?
2. If the body is projected from the stationary frame of reference, is the horizontal component of velocity of the projectile same from both frames of reference?
3. Can a projectile appear to follow parabolic trajectory from both stationary and moving frames of reference?
4. Can the trajectory of projectile appear to be vertical from stationary frame and parabolic from moving frame of reference?
5. Can the trajectory of projectile appear to be parabolic from stationary frame and vertical from moving frame of reference?
6. Can the magnitude of range be same from both frames of reference?
7. Is the time of flight same for both the frames of reference?
8. Under what condition(s) can the range from moving frame of reference be twice the range from a stationary frame of reference?

Note :

While simulations help to provide valuable insights and visualizations, a rigorous mathematical solution should always be considered as a benchmark, demonstrating not just familiarity with the concept, but a deep understanding of the underlying principles.

Learn Explore Enjoy

SIGMA Physics resource Centre