

Two dimensional kinematics (but no assigned quiz on this)

1. At what point along its path will the speed of a projectile undergoing parabolic motion be a minimum?
2. A bullet is fired horizontally from a high-powered rifle. At the same time, and at the same vertical height above the ground, another identical bullet is dropped. Which bullet hits the ground first?
3. Refer to the diagram (a famous question). "The monkey and the hunter". Where would a person aim (above, below, or directly at) to fire a gun such that the bullet would hit the monkey if the monkey dropped from the tree at the same time as the bullet was fired?

