

A Challenge:

Think about motion in 2 dimensions.

A man shoots a gun horizontally from the top of a hill. Given the muzzle velocity (200 m/s) and the height of the hill (50 m), calculate how far away from the base of the hill the bullet will land.



A hunter is in the jungle. He sees a monkey hanging from a tree. This is a smart monkey. When he sees the flash of the gun, the monkey will let go of the tree and fall to the ground and run away.



The hunter is smart, and knows the monkey will jump down. Where should the hunter aim?
(Directly at the monkey,
Above the monkey, or
Below the monkey)?