

Physics 10154 - Quiz 7B

A 150-gram block is initially at rest on a horizontal surface with a coefficient of kinetic friction of 0.334. A 7.50-gram bullet is fired into the block and embeds itself into the block after the collision. After the collision, the bullet-block system slides 6.40 meters across the surface before coming to rest.

What was the speed of the bullet prior to the collision?