

Name: _____ Block: _____

Level Projectiles #2

1. A ball rolls with a speed of $2.0 \frac{\text{m}}{\text{s}}$ across a level table that is 1.0 m above the floor. How far along the floor is the landing spot from the table?

0.90 m

2. A rescue pilot drops a survival kit while her plane is flying at an altitude of 2 000.0 m with a forward velocity of $100.0 \frac{\text{m}}{\text{s}}$. If air friction is disregarded, how far in advance of the starving explorer's drop zone should she release the package?

2 020 m

3. A rifle is fired horizontally and travels 200.0 m. The rifle barrel is 1.90 m from the ground. At what speed must the bullet have been travelling? (Ignore friction.)

$321 \frac{\text{m}}{\text{s}}$

4. A skier leaves the horizontal end of a ramp with a velocity of $25.0 \frac{\text{m}}{\text{s}}$ and lands 70.0 m from the base of the ramp. How high is the end of the ramp from the ground?

38.4 m

5. A movie stunt driver on a motorcycle speeds horizontally off a 50.0 m high cliff. How fast must the motorcycle leave the cliff top if it is to land on the level ground below at a distance of 90.0 m from the base of the cliff?

$28.2 \frac{\text{m}}{\text{s}}$