

Projectile Motion Worksheet

1. A ball rolls off a desk at a speed of 3.0 m/s and lands 0.40 seconds later.
 - a) How far from the base of the desk does the ball land? [1.2m]
 - b) How high is the desk? [0.784m]
 - c) What is the speed and angle of impact? [4.94 @ 52.6° below horizontal]

2. A slingshot is used to launch a stone horizontally from the top of a 20.0 meter cliff. The stone lands 36.0 meters away.
 - a) At what speed was the stone launched? [17.8m/s]
 - b) What is the speed and angle of impact? [26.6m/s @ 48.0° below the horizontal]

3. A ball rolls with a speed of 2.0 m/s across a level table that is 1.0 m above the floor. Upon reaching the edge of the table, it follows a parabolic path to the floor. How far along the floor is the landing spot from the table? [0.90 m]

4. A rescue pilot drops a survival kit while her plane is flying at an altitude of 2000.0 m with a forward velocity of 100.0 m/s. If air friction is disregarded, how far in advance of the starving explorer's drop zone should she release the package? [2020 m]

