AP Physics – More Blamed Projo Moto

Game _____Per__



Wisdom is not a product of schooling but of the lifelong attempt to acquire it. --Albert Einstein

1. A ball is thrown straight up with a speed of 12.5 m/s. (a) How high does it go and (b) how much time does it take to get there?

2. A Volkswagen runs straight off a cliff. The Volkswagen is traveling at a speed of 34.5 m/s when if leaves the road. If the cliff is 12.5 m high, how far horizontally does the car travel before it smashes into the ground below?

3. A stealth bomber on a training mission drops one of its bombs from a height of 3 500 m during level flight. The bomb travels a horizontal distance of 1.25 km. What was the plane's horizontal speed?

4. An arrow is launched with a velocity of 88.7 m/s at an angle of 33.0° to the horizontal. How far does the arrow travel?

5. A brick is thrown upward from the top of a building at an angle of 25° to the horizontal and with an initial speed of 15 m/s. It strikes the ground below. If the brick is in flight for 3.0 s, how tall is the building?

6. A ball is thrown at an angle of 43° to the horizontal. It travels a distance of 75 m in 2.3 s. (a) What was its original velocity? (b) How high did it go?

7. The USS Theodore Cleaver fires a projectile at an angle of 25.0 °. The time of flight for the projectile is 48.4 s. What was the horizontal distance of the shot?

8. A kid runs straight off a diving board. The diving board is 3.0 m above the water. If the kid travels 2.5 m horizontally from the edge of the board when he hits the water, what was his horizontal speed?

9. The nose wheel falls off of a 767 when it is flying at an altitude of 12 500 m. Okay, (a) how much time for it to hit the ground? (b) If the plane has an air speed of 885 km/h, what is the horizontal distance that the wheel travels before it hits the ground.

10. A 5 inch projectile is fired with a velocity of 288.7 m/s at an angle of 18.0° to the horizontal. How far does the projectile travel?

11. An aircraft launches a bomb. The plane is flying upward at an angle of 55° to the horizon. When the bomb is launched, de plane has a speed of 745 km/h. At the time of launch, the bomb is 8 750 m above the ground. So (a) how high does the bomb go from where it was launched? (b) How far horizontally does it travel? (c) How much time till it hits?