

1. A ball is thrown vertically upward with a speed of 25.0 m/s.

(a) How high does it rise?

(b) How long does it take to reach its highest point?

(c) How long does the ball take to hit the ground after it reaches its highest point?

(d) What is its velocity when it returns to the level from which it started?

2. A cannon fires a shell straight upward; 1.5 s after it is launched, the shell is moving upward with a speed of 20 m/s. Assuming air resistance is negligible, find the speed (magnitude of velocity) of the shell at launch and 4.7 s after the launch

3. A clay pigeon is fired straight up and reaches its highest point three seconds later. What was its initial speed? What was its max Height?

4. A cannon shoots a shell straight up at an initial velocity of

300 m/s. If air resistance can be neglected, how long will it take the shell to go up and come back down? What is the maximum height it reaches?

5. A ball is thrown vertically upward with a speed of 19.0 m/s. (a) How high does it rise? _____ m. (b) How long does it take to reach its highest point? _____ s. (c) How long does the ball take to hit the ground after it reaches its highest point? _____ s. (d) What is its velocity when it returns to the level from which it started? _____ m/s

6a) How fast will a brick be going after it falls for 2.5 seconds? How high was a brick dropped from if it falls in 2.5 seconds?

6.) An apple falls out of a tree and takes 1.75 seconds to strike the ground. How fast was the apple going when it hit the ground? An apple falls out of a tree and takes 1.75 seconds to strike the ground. How high was the apple from the ground?

7.) A high diver dives off a platform and strikes the water 2.857 seconds later. How fast is he traveling as he strikes the water? How high is the diving platform?

8. A trapeze artist misses the trapeze and falls into the net 9.2 meters below. How long will it take him to fall?

9) A plane drops a C.A.R.E. package to some needy people in the jungle from a

height of 1000m. How long will it take the package to strike the ground?

10.) A book falls off a 1 meter tall table. How long will it take for the book to hit the floor?

11. A rock is thrown out of a volcano. When it started to fall, it took 9.5 seconds to hit the ground. How fast was the rock traveling as it struck the ground? How high was the rock when it began to fall?

12. Wyle Coyote has missed the Road Runner again and has fallen through a hole in the edge of a cliff. It takes him 4 seconds to strike the ground and go SPLAT. How fast is he going when he hits the sand below? How high is the cliff?