

Motion Problems ... Chpt 5 rev 4

1. A ball rolls down an incline at an acceleration of 1.00 m/s^2 . At a certain instant it's velocity is 0.50 m/s . a) What is the velocity of the ball 10.0 s later?...(10 s after the initial vel. Of 0.50 m/s) b) How far did the ball travel during that 10.0 s interval?
2. A car traveling at 65 km/hr brakes at -6.0 m/s^2 . a) How long will it take the car to stop? B) How far will the car travel during braking?
3. What is the acceleration of an object that accelerates for 7.4 m in 2.5 s ?
4. A car traveling at 12 m/s accelerates at 8.5 m/s^2 for 130 m . What is the velocity of the car after it accelerates?
5. A ball is shot upward at 125 m/s . a) How high will it go? B) How long will it take to get to that height?
6. A free falling object reaches a velocity of -45 m/s before it hits the ground. A) How long did it fall? b) How high did it fall from?
7. How far does an object fall "during" the 5^{th} second of falling?
8. How long does it take a ball to drop 145 m ? What velocity does it hit the ground at?