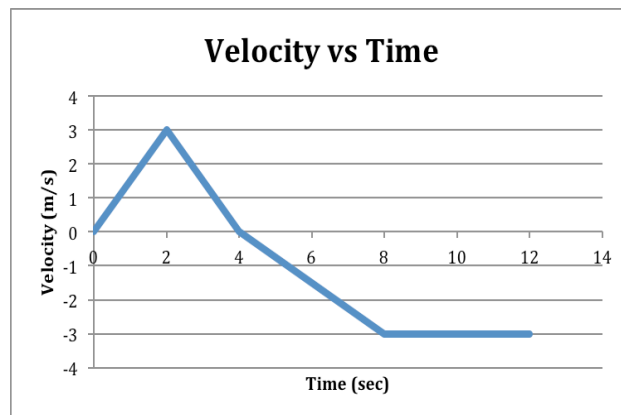


Kinematics Review

1. A rock is thrown off a 50 m tall bridge with an upward velocity of 39.2 m/s.
 - a. What is its speed after 6 sec?
 - b. When does it hit the ground?
 - c. When is it 44.1 m below its starting point?
 - d. How high did it go?
 - e. Where is it after 5 sec?
2. Fred drops a stone off a building. 20 m below Fred is Sam and 10 m below Sam is Ernie. How long does it take the stone to go from Sam to Ernie?
3. A ball is rolled up a gentle incline with a starting speed of 6 m/s. The ball rolls up for 10 m then back down to its starting point.
 - a. Find the acceleration.
 - b. Find the total time for the trip.
 - c. Where is it after 4 sec?
 - d. What is its speed after 5 sec?
4. The boys are playing in the mud. They run at full speed and dive headfirst into the mud and slide to a stop. A physics student, armed with a stopwatch and tape measure finds that one boy skidded 22.5 m in 4.5 sec. What was the boy's speed at the start of his slide?
5. Assume the position of the object is zero at $t = 0$.
 - a. Find the acceleration at $t = 1, 6,$ and 9 ?
 - b. Find the position at 2, 4, and 10 sec.
 - c. When is the object back at a position of 0?



6. A blind racecar driver starts from rest and accelerates at 4 m/s toward a brick wall 200 m away. He crashes into the wall and comes to a rest in 0.5 m. Find his deceleration.