

Describing Motion: Velocity

Chpt 3 rev R

Following the basic problem solving approach to solve the following problems: List all data including vector diagrams, list type motion, choose appropriate formula and list it, insert values into formula, and solve problem. All steps must be included to get full credit. Remember, acceleration due to gravity is -9.81 m/s^2

1. You calculate that a bullet travels 178 m in 0.600 s. a) What is the velocity of the bullet? b) How far would it go in 2.3 s?
2. a) How much time does it take an arrow traveling at 187 m/s to travel 50.0 m? b) What is its speed in km/hr?
3. Bad Billy runs at 16 km/hr for 15.3 seconds. A) How far does her run? B) Oh no!, Bad Billy slips and falls and comes to rest in 1.3 s. What is his acceleration?
4. A bullet accelerates from rest to 422 m/s in a 0.00569 s. A) What is the acceleration of the bullet in the barrel? ...B) How long is the barrel?
5. You drop a rock off a cliff and it hits the ground 2.00 s later. A) How fast is it going? B) How far did it fall?