

# Describing Motion: Velocity

Chpt 3 rev 4 Show all steps!

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 and slips and falls and comes to rest in 1.3 s. a) What is his acceleration? b) How far does he slide?
- 4 A ball is thrown off a cliff at -13 m/s (downward) and hits the ground 3.7 seconds later. A) What velocity does the ball hit the ground at?...b) How high is the cliff?
5. A bullet accelerates from rest to 422 m/s in a 1.2 m barrel. A) How long did it take?...What is the acceleration of the bullet in the barrel?
6. A sub-atomic particle can travel at  $1.56 \times 10^8$  m/s. How long does it take for it to travel across the molecule if the distance is  $2.20 \times 10^{-7}$  m?