

# Chapter 2 : Speed and Velocity

PRINT Name \_\_\_\_\_ Period \_\_\_\_\_

You may write on this paper and on the back.

All work **MUST** be done in **INK**. All Questions **MUST** be answered in complete sentences. Problems are to be solved by "Showing The Method": The Hup, Two, Three, Four. Be sure to **PRINT** your Name, the Period, and the Assignment on your papers.

1. Give examples of Scalar and Vector quantities.
2. Using Hup, Two, Three, Four, Find the Speed when the distance is 450 meters and the time is 320 seconds. Ans: 1.41 m/s
3. Compare Acceleration with Speed. Show why the unit for acceleration is meters per second **squared**.
4. Making a **Data Table** and using Hup, Two, Three, Four, find the Final Velocity when the Acceleration is  $375\text{m/s}^2$  and the time is 15.0 s. DO the Units! (... Four). Ans: 5.63 m/s. (3 sig digits).
5. Making a **Data Table** and using Hup, Two, Three, Four, find the Distance covered when the time is 45.6 s and the acceleration is  $85.2\text{ m/s}^2$ . DO the Units! (... Four). Ans: 88600m (3 sig digits).
6. Making a **Data Table** and using Hup, Two, Three, Four, Find the Final Velocity of a ball that is accelerated at the rate of  $82.5\text{m/s}^2$  and travels for 523m. Ans: 294m/s (3 sig digits).
7. Making a **Data Table, rearranging a formula** and using Hup, Two, Three, Four, 1) Find the time to reach the water when dropping off a 10.0 meter diving board. 2) Find the speed when hitting the water. Use  $g = 9.8\text{m/s}^2$ .  
Answers:  $t = 1.43\text{s}$        $v = 14.0\text{m/s}$
8. A jumper takes 6.04s to hit the dirt. Using a Data Table and Zee Method, 1) Find the height of her fall and 2) How fast was she moving at smash up? Use  $g = 9.8\text{m/s}^2$ . . DO the Units!  
Answers:  $d = 179\text{m}$     $v = 59,2\text{m/s}$  (3 sig digits).