WORKSHEET 2

CHAPTER 3

MOTION IN A STRAIGHT LINE

1. Two particles A and B are moving along the same straight line B is ahead of A.Velocities remain unchanged, What would be the effect on the magnitude of relative velocity if A is ahead of B ?
2. The distance covered by a body is found to be directly proportional to the square of time. Is the body moving with uniform velocity or uniform acceleration ? If the distance travelled be directly proportional to time.
3. A particle in one dimensional motion with constant speed must have zero acceleration. Give reason.
4. The velocity of a particle is $v = 5 + 2 (a_1 + a_2 t)$ Where a_1 and a_2 are constants and t is the time. What is the acceleration of the particle ?
5. State with reasons which of the following graphs cannot possibly represent one – dimensional motion of a particle.
   For diagram refer text book pg no-57 fig. 3.20
6. What is the position at any time, for a body starting from rest, with an acceleration $a = \alpha t^2$
7. A ball is thrown vertically upwads. Draw its : a) velocity – time curve b) acceleration time curve
8. Give an eg of a body possessing zero velocity and still accelerating.
9. Why does the earth impart the same acceleration to all bodies ?

10. Plot a position – time graph for positive acceleration.