1. Convert $1mm^3$ to cm^3.

2. A projectile is launched at an angle of 45° with an initial velocity of 25 m/s.
    a. Find the maximum height of the projectile.
    b. Find the range of the projectile.
    c. Find the time of flight of the projectile.

3. A block with a mass of 10 kg is sitting at rest on a plane with an incline of 30°. Find the coefficient of static friction.

4. A car crashes into a wall with a force of 10000 N. The car's momentum changes by 250 kg m/s. How long did the impact last?

5. Calculate the momentum of a 20 kg ball with a velocity of 10m/s

1. A system consists of two particles. Particle A is at rest with a mass of 2 kg and another 1kg particle (B) is moving towards the particle at rest with a velocity of 5 m/s. After the two particles collide, 2 units of momentum are transferred to to particle A.
   a. What is speed of particle A?
   b. How many units of momentum does particle B have?
   c. What is the speed of particle B?
   d. What direction is particle A moving with respect to particle B?

2. What does conservation of momentum have to do with Newton's First Law?

3. What does conservation of momentum have to do with Newton's Second Law?

4. What does conservation of momentum have to do with Newton's Third Law?