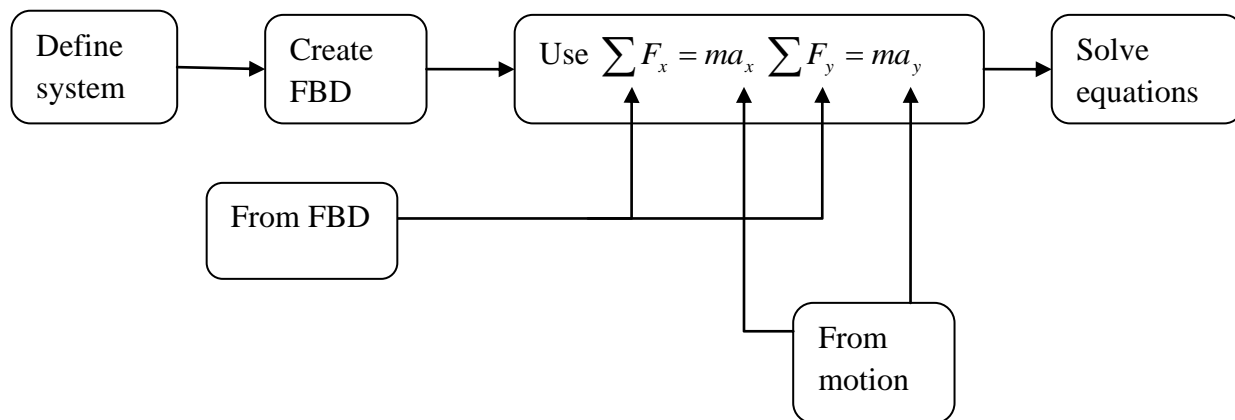


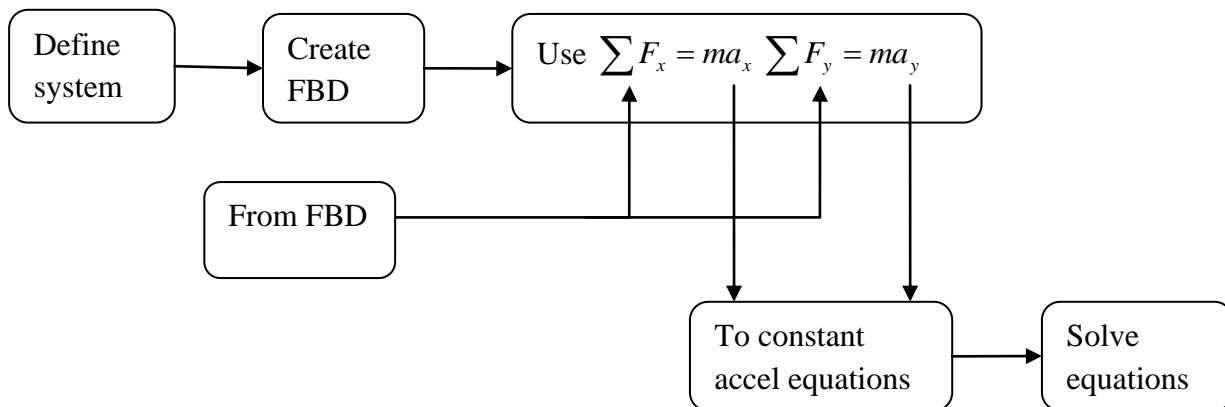
Problem-Solving Strategy for Newton's Second Law (page 113)

- Decide what object will have Newton's second law applied to it.
- Identify all the external forces acting on the object.
- Draw an FBD to show all the forces acting on the object.
- Choose a coordinate system. If the direction of the net force is known, choose axes so that the net force (and the acceleration) are along one of the axes,
- Find the net force by adding the forces as vectors.
- Use Newton's second law to relate the net force to the acceleration.
- Relate the acceleration to the change in the velocity vector during a time interval of interest.

For problems where you know about the motion. For example, an object slides along surface.



For problems where you want to determine something about the motion. For example, how far will the object travel if it starts from rest?



All the problems can be solved by careful use of this system. It takes practice to master.