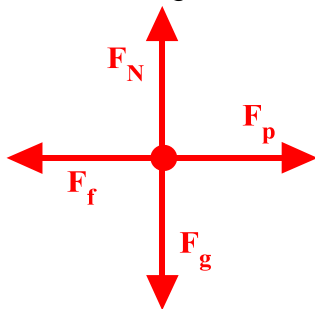


2.1.3 In Class or Homework Exercise

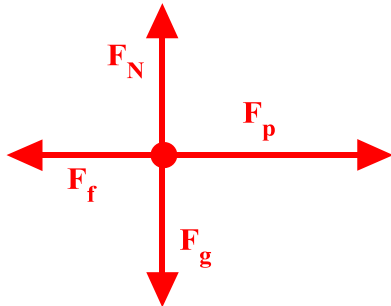
1. Draw free body diagrams for the following situations:
a. A car sitting at rest on the road.



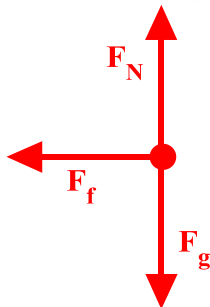
- b. A car moving at a constant velocity along the highway.



- c. A car accelerating to the right along the highway.



- d. A car coasting to a stop (to the right) along the highway.



2. Draw free-body diagrams for the following situations:
 a. A pail hanging from a rope is held motionless in a well.



- b. A pail hanging from a rope is lifted at a constant speed.

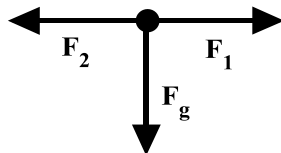


- c. A pail hanging from a rope is lifted with an upward acceleration.



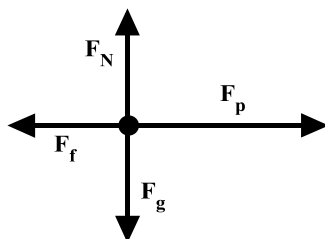
3. Predict the motion that each object would undergo based on the free-body diagram provided:

a.



It will accelerate downward.

b.



It will accelerate to the right.

C.



It will accelerate upward.