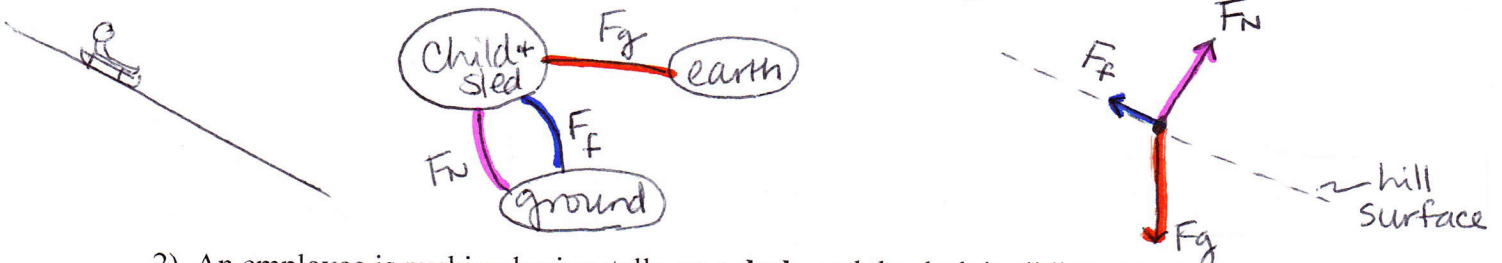


IF1 - System Schema and Free Body Diagrams - B

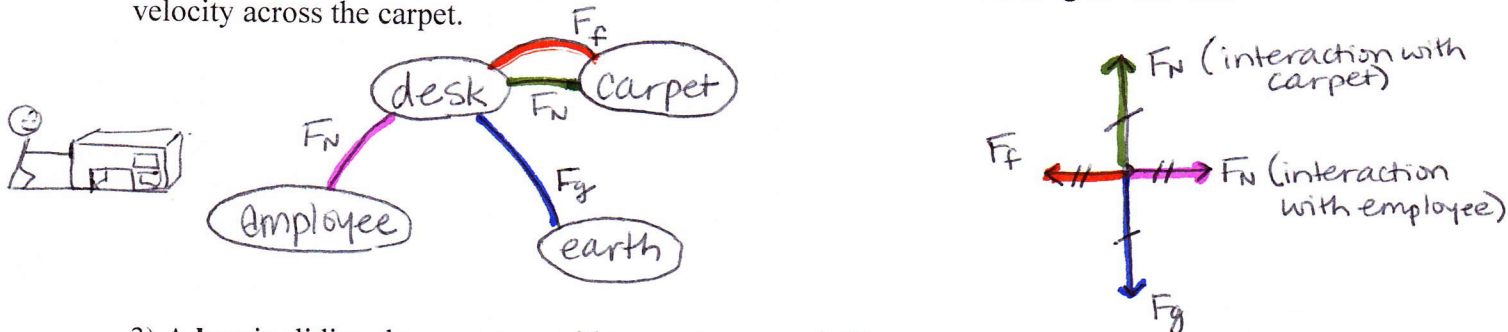
Directions: For each situation...

- (a) draw a system schema diagram
- (b) draw a quality FBD for the object in bold

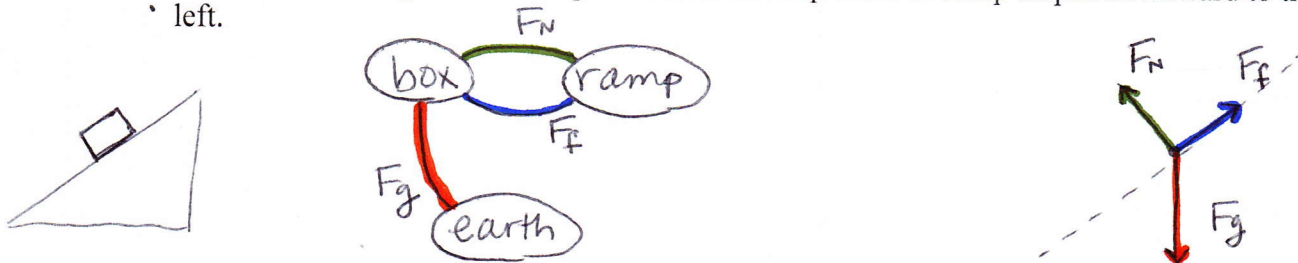
1) A **child on a sled** is sliding down a snowy hill that slopes downward to the right. There is friction, but the speed of the child and sled is increasing.



2) An employee is pushing horizontally on a **desk**, and the desk is sliding at a constant velocity across the carpet.



3) A **box** is sliding down a ramp with a constant speed. The ramp slopes downward to the left.



Check:

- Is F_N in a direction that is perpendicular to the surfaces in contact?
- Is F_f parallel to the surface along which the object is sliding or could slide?
- Are all force vectors labeled? Does each one have an arrowhead?