AP 1 Force FR

10/10 1 ai) The system is in equilibrium since velocity is constant ($F_{net}=0$). 2

ii) F_N is not balanced by mg bc ~~there is~~ a vertical component to the F as well. 2

F_f is not balanced by F, but it is by ~~the~~ horizontal component of F. 2

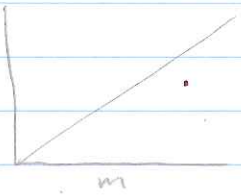
b) The object will now have a leftward acceleration causing it to slow down as it continues to move right. 2

c) The object will have an acceleration since ~~the~~ increased F will increase F_{Ax} and give a F_{net} 70 →. 2

8/8 2. a) Object A has twice as much Fnet or Object B has 1/2 Fnet 2

$a \propto F_{net}$ $a \frac{1}{\propto} m$

b) Object A will have a lower acceleration since it is more massive. There will be a smaller Fnet on Object A since it will have a larger F_f. 3

c) 

- test various masses & record the Fnet
- Plot on an Fnet vs. mass graph
- The slope of the graph will show the objects acceleration. 3

$F_{net} = F_A - F_f$

$F_{net} = 20 - 5 = 15$

$F_{net} = 10 - 5 = 5$

→ Not 2x increase in Fnet or acc