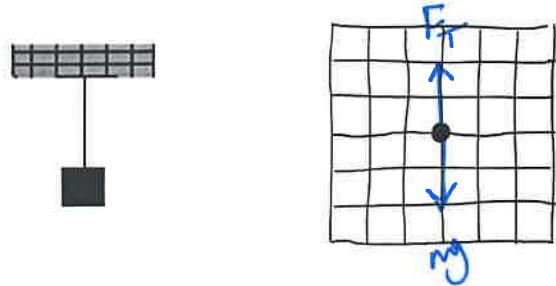


Force your name here: key

AP Physics C: 4.0 Forces and FBD

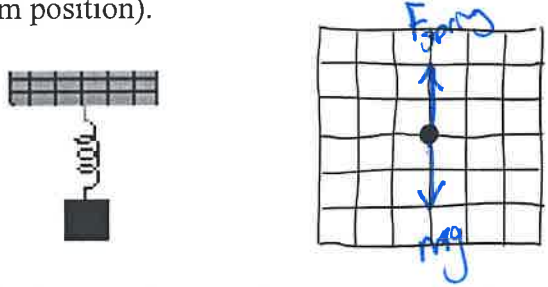
Mark the forces acting on each object and draw a FBD for each object to the right of it.

1. A block hangs at rest from the ceiling by a piece of rope. Consider the forces acting on the block.



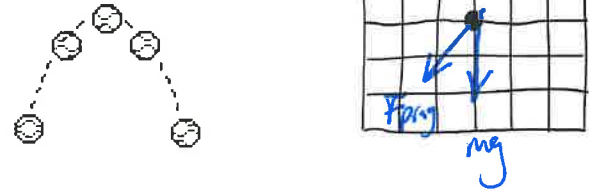
<input checked="" type="checkbox"/>	Weight
<input type="checkbox"/>	Spring Force
<input checked="" type="checkbox"/>	Tension Force
<input type="checkbox"/>	Normal Force
<input type="checkbox"/>	Friction
<input type="checkbox"/>	Drag
<input type="checkbox"/>	Applied Force

2. A block hangs from the ceiling by a spring. Consider the forces acting on the block when it is at rest (at its equilibrium position).



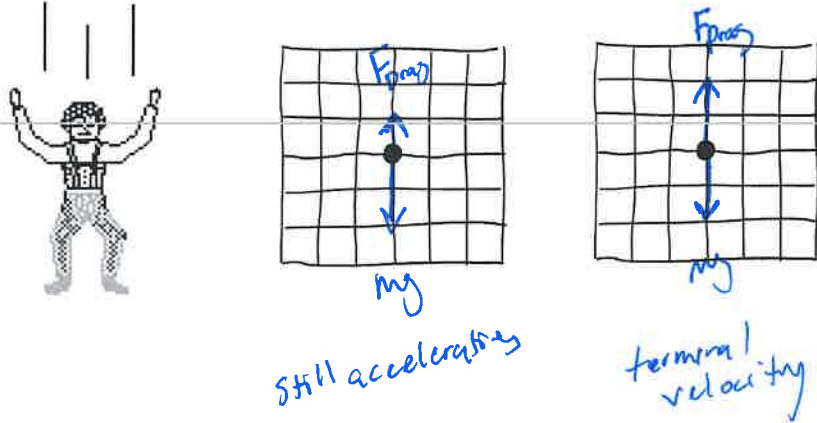
<input checked="" type="checkbox"/>	Weight
<input checked="" type="checkbox"/>	Spring Force
<input type="checkbox"/>	Tension Force
<input type="checkbox"/>	Normal Force
<input type="checkbox"/>	Friction
<input type="checkbox"/>	Drag
<input type="checkbox"/>	Applied Force

3. A ball is shot into the air with a spring-loaded cannon. Consider the forces acting on the ball while it is in the air. Do the FBD for a point at the ball rises.



<input checked="" type="checkbox"/>	Weight
<input type="checkbox"/>	Spring Force
<input type="checkbox"/>	Tension Force
<input type="checkbox"/>	Normal Force
<input type="checkbox"/>	Friction
<input checked="" type="checkbox"/>	Drag
<input type="checkbox"/>	Applied Force

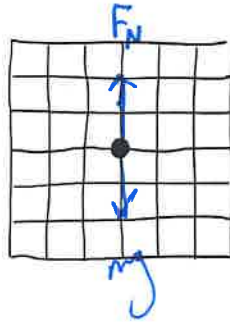
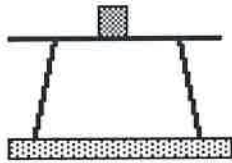
4. A skydiver who hasn't opened his parachute yet is falling. Consider the forces acting on the skydiver. Do two FBD, where he is accelerating and one where he has reached terminal velocity.



<input checked="" type="checkbox"/>	Weight
<input type="checkbox"/>	Spring Force
<input type="checkbox"/>	Tension Force
<input type="checkbox"/>	Normal Force
<input type="checkbox"/>	Friction
<input checked="" type="checkbox"/>	Drag
<input type="checkbox"/>	Applied Force

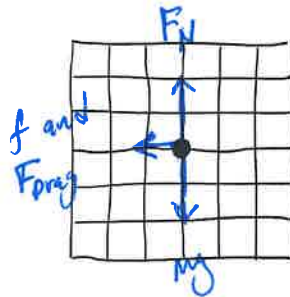
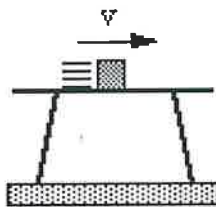
Force your name here: _____

5. A block rests on top of a table. Consider only the forces acting on the block.



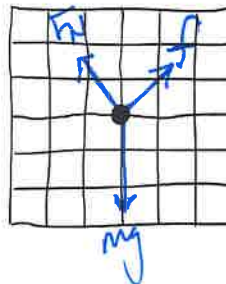
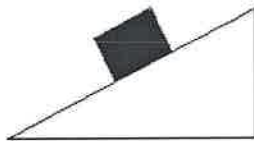
X	Weight
	Spring Force
	Tension Force
X	Normal Force
	Friction
	Drag
	Applied Force

6. A block slides across the top of a table with constant velocity. Consider only the forces acting upon the block.



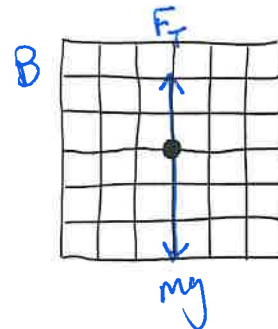
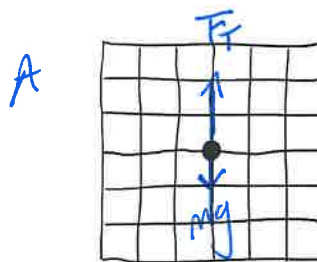
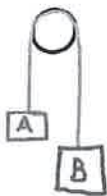
X	Weight
	Spring Force
	Tension Force
X	Normal Force
X	Friction
X	Drag
	Applied Force

7. A block rests on an incline plane without sliding. Consider the forces acting on the block.



X	Weight
	Spring Force
	Tension Force
X	Normal Force
X	Friction
	Drag
	Applied Force

8. Below is what is called an Atwood machine. Two blocks hang from a rope. Here block B has more weight than block A. Draw a FBD for block A and B and label them.



9. Define what a force is.

push or pull on an object

10. What are the units for force and what is the formula?

Newtons F=ma

11. What is a contact force and what is a force at a distance?

*Contact Force must be touching the object
force at a distance doesn't, like gravity*