

NAME: Key

date: \_\_\_\_\_

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



- Weight
- Spring
- Tension
- Normal
- Friction
- Drag

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).



- Weight
- Spring
- Tension
- Normal
- Friction
- Drag

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.



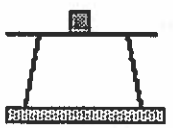
- Weight
- Spring
- Tension
- Normal
- Friction
- Drag

4. A skydiver who hasn't opened his parachute yet is falling. Consider the forces acting on the skydiver.



- Weight
- Spring
- Tension
- Normal
- Friction
- Drag

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

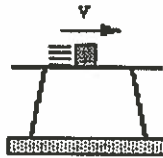


- Weight
- Spring
- Tension
- Normal
- Friction
- Drag

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



- Weight
- Spring
- Tension
- Normal
- Friction (kinetic)
- Drag

7. The wheels of a car are locked as it skids to a stop while moving across a level highway.



- Weight
- Spring
- Tension
- Normal
- Friction (kinetic)
- Drag

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



- Weight
- Spring
- Tension
- Normal
- Friction (static)
- Drag

11. Find the maximum force the dual range force sensor can detect in a negative and positive direction?

12. Which direction was a negative value and which was a positive?

13. Now hang different sized masses off the force sensor and record the results below.

50kg = \_\_\_\_\_ Newtons

100kg = \_\_\_\_\_ Newtons

200kg = \_\_\_\_\_ Newtons

14. Looking at the results from #13, how do you think you might go about calculating force?