Name _____ Period_____ Date _____

Physical Science Review

1. Molly is investigating the change in motion of an object. She kicks a soccer ball that is sitting on a soccer field three times. Molly changes the force of her kick each time and uses a device to measure the force. The data she collected are shown in the table.

Force of Kick (N)	Distance Traveled (m)
150	31
200	39
270	47

a. Identify the independent variable _____and

dependent variable _____of the investigation.

b. Describe two forces acting on the soccer ball when Molly kicks it.

_____

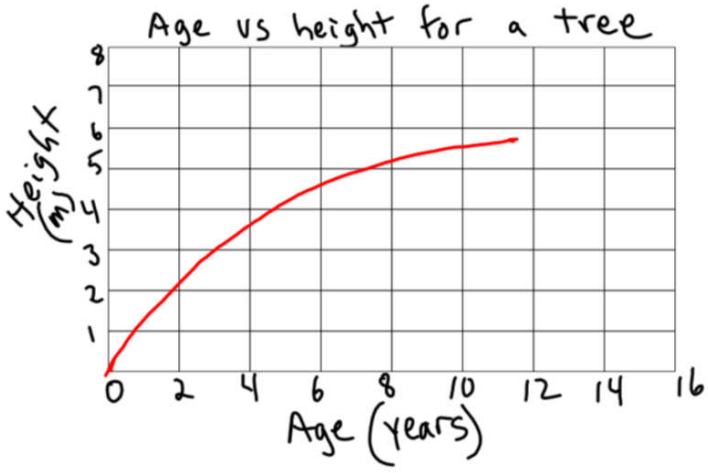
_____

2. Draw and **label** the force pairs in this situation (do not forget gravity…)

3. How would you describe Center of Mass?

4. What is the name of the lead weight used by the Romans that points to the center of the Earth? _____

5. What would be the height of the tree when it is 15 years old? (a graphing problem) _____



6. What is it called when you predict something from a graph that is **outside** of the measured data set?

_____

7. What is it called when you predict something from a graph that is **inside** of the measured data set?

_____

8. What is a force? _____

9. What are three types of forces that can act at a distance?

a. _____

b. _____

c. _____

10. What is Gravitational Potential Energy?

11. What is Chemical Potential Energy?

12. What is the name of the toy used to demonstrate collisions and it has 5 or 7 balls?_____

13. How can you charge up a balloon with static electricity? Make sure to include something about the electrons…

14. What is friction and which direction does it act?

15. What are three Factors that affect friction?

a.

b.

c.

16. Describe Static Friction

17. How can friction be reduced? a._____ b. _____

c._____ d._____

18. Newton's First Law of Motion is also called the Law of _____

19. An object will remain in motion in a straight line, or at rest, unless there is an outside _____ _____ acting on it.

20. Mass is a measure of an object's _____ and is measured in _____

21. An object is considered to be stable when its _____ _____ _____ is over its _____ _____ support.

22. What is weight?

23. Newton's Second Law can be shown by this equation that we used in the Ferrari example.

24. Newton's Third Law states:

25. If you had a motor

26. What speed would you be going if you travel 50 miles in 3 hours? _____

27. If your speed increased steadily from 14 mph to 17 mph in the first second and then from 17 mph to 20 mph in the 2nd second, then what was your acceleration? (with units)

_____

28. Potential energy is the energy an object has based on its _____ or _____.

29. Also be able to draw a proper graph if given a data table. This would include a title, labels, units, data points, and curve fitting.

30. Why is interpolation considered to be more reliable than extrapolation?

31. Add 3D to this truck. Make it open in the back of the truck. Add details if you like.