MIGhTY PhYSICS

BLITZ   Ch 4

PRINT NAME --- Period_____

*** You MUST USE INK, Use no "**is when's**" and it's "**se<u>pa</u>rate**".

*** You may use your notes, but not help from others.

EXPLAIN IN COMPLETE SENTENCES AND GIVE EXAMPLES:

1. Discuss the theories of rolling friction, sliding friction and starting friction.

2. Define Newton's Three Laws of Motion and give an example of each.

3. State Newton's Law of Gravity in **words** and in math **formula**. Define the
    parameters in the formula.

4. Describe **three** advantages and disadvantages of friction.

5. a) Using Newton's Second Law, show why all freely falling objects
    accelerate at g. b) Using Galileo's grapes, explain show why all freely
    falling objects accelerate at g.

6. Discuss Mass and Weight and give two examples.

*** SHOW METHOD OF SOLUTION FOR ALL PROBLEMS (The 1,2,3,4!)

7. An object whose weight is 500.0 n is sliding with constant speed down an incline of 30.0^o.
    Find its coefficient of friction.

8. Find the weight of a 95.0 Kg beefy toshtada.

9. Find the force of friction needed to drag a 1800.0 n wooden coffin along a
    wooden floor. The coefficient of friction is 0.30.

10. A cannon of mass 4000.0 Kg, fires a ball of mass 60.0 Kg at a rate of
    300.0 m/s. Find the kick back velocity of the cannon.

FORMULAS: $f = ma$, $wt = mg$, $F = GMm/d^2$, $Mv = mV$, $g = 9.8 m/s^2$, $\mu = f/N$