MIGhTY PhYSICS

BLITZ   Ch 8

PRINT NAME _____ Period _____

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

*** You may use our notes but not the help of others.

EXPLAIN IN COMPLETE SENTENCES AND GIVE EXAMPLES:

1. Find the work done by a portly physics instructor whose mass is 82.0 kg when he ascends a staircase 8.0 m high.

2. Describe the two types of equilibrium, and what causes them.

3. Find the efficiency of a pulley system wherein a force of 625 n pulling a distance of l2.5m causes an engine weighing 2200 n to rise 1.50 m.

4. Explain how to find the center of mass of an object on the earth and in outer space

5. Find the potential energy when a 2.20 kg water balloon is heaved 8.20 m high.

6. What is torque, how is it measured, and how can it be used to determine the center of mass of a system of two balls connected by a bar?

7. Compare Center of Gravity and Center of Mass and tell how to find them.

8. A uniform bar has a 20.0 n downward force 15.0 cm to the left of the fulcrum and a 5.00 n downward force 10.0 cm to the left of the fulcrum. Where must a 12.0 n downward force be placed to the right of the fulcrum to establish rotational equilibrium? Neglect the weight of the bar.

9. Discuss the SIX types of simple machines, and show how they can be resolved into TWO main types.

10. Describe TWO ways to find the mechanical advantage of a pulley system. Include "theoretical MA and actual MA".

FORMULAS:
$$W = f\Delta d \quad \mu = f/N \quad P = W/t \quad AMA = L/f \quad TMA = d_f/d_l \quad Wt = mg$$
$$Eff = AMA/TMA \quad PE = mgh \quad f = ma \quad C_{torque} = CC_{torque} \quad F = k\Delta d \quad Mv = mV$$