



MIGHTY PHYSICS



BLITZ Ch 5 & 6

PRINT NAME ----- Period -----

*** You MUST USE INK, Use no “is when's” and it's “separate”.

*** You may yuse your notes.

SHOW METHOD (1,2,3,4) FOR ALL PROBLEMS:

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. (Remember $w = mg$).
2. Define Momentum and give two examples.
3. A 2000.0 kg hippie bus has a velocity of 22.0 m/s, Find its momentum.
4. Determine the power needed to raise a case of chocolate chips whose mass is 22.0 kg to a height of 14.0 m in 22.0 s. The chase is on.
5. Find the potential energy when a 2.00 kg water balloon is heaved 8.20 m high. (Remember $w = mg$).
6. Find the kinetic energy of a mudball of mass 10.0 kg moving at 18.0 m/s.
7. Define Work, and give two examples.
8. Calculate the recoil velocity of a rifle whose mass is 4.00 kg when the bullet whose mass is 0.050 kg is fired at 600 m/s.
9. Discuss two types of collisions and give examples.
10. Define Potential Energy and Kinetic Energy and give an example of each.

FORMULAS:

$$W = f\Delta d \quad \mu = f/N \quad P = W/t \quad p = mv \quad F\Delta t = \Delta p \quad Wt = mg$$

$$Mv = mV \quad PE = mgh \quad f = ma \quad KE = 1/2 mv^2 \quad F = k\Delta d$$

$$a = \Delta v/t \quad I = f \Delta t \quad m_1v_{1,i} + m_2v_{2,i} = m_1v_{1,f} + m_2v_{2,f}$$