Due: 8/17/2005 (Wednesday) **Algebra Wake-up**
Assigned: 8/15/2005 (Monday)

1) Have your Lab Safety and Class Rules sheet signed and return it to class by Tuesday.

2) solve the following:
$v_f = 2$ m/s; $v_i = 26$ m/s; $a = -9.8$ m/s^2;
find time if: $v_f = v_i + at$

3) If $E_k = (½)mv^2$, how fast is an object going that has 25 joules of kinetic energy and has a mass of 3 kg?

4) How much emf is produced when an area of 2.2 m^2 with 43 loops feels a magnetic field change of 4.5 Teslas in 0.33 seconds? Use $\theta = 60^o$.
Defined variables:
-N is the number of turns or loops of wire
A is the areas of each loop
B is the magnetic field strength (in Teslas)
θ is the angle between the normal of the coil and the direction of B
t is time

$$emf = -N\frac{AB(\cos\theta)}{\Delta t}$$

5) From bellwork: "A barnacle (a kind of shellfish) lives on whale. Since the barnacle is a filter feeder (eats from the water that passes through it), living on the whale gives it greater food access since the whale moves, allowing more water to pass through. The whale could care less, since it is neither helped nor harmed by the barnacles." What kind of symbiosis is this?