KINETIC AND POTENTIAL ENERGY WORKSHEET **Name:_____**

Determine whether the objects in the following problems have kinetic or potential energy. Then choose the correct formula to use: **$KE = 1/2\ m\ v^2$** OR **$PE = mgh$**
Show your work in the space provided or on the back of this sheet.

1. A 10 gram ball is rolling at 3 m/s. The ball has _____ energy. Calculate it.

2. A 10 gram ball is held 2 meters from the ground. It has _____ energy. Calculate it.

You serve a volleyball with a mass of 2100 g. The ball leaves your hand with a velocity of 30 m/s. The ball has _____ energy. Calculate it.

2. A toy baby carriage is sitting at the top of a hill that is 21 m high. The carriage with the baby has a mass of 200 grams . The carriage has _____ energy. Calculate it.

3. A toy car is traveling with a velocity of 4 m/s and has a mass of 1120 g. The car has _____energy. Calculate it.

4. A cinder block is sitting on a platform 20 m high. It has a mass of 790 grams. The block has _____ energy. Calculate it.

5. There is a bell at the top of a tower that is 5 m high. The bell has a mass of 190 grams. The bell has _____ energy. Calculate it.

6. A toy roller coaster is at the top of a 2 m hill and has a mass of 9660 grams. The coaster (at this moment) has _____ energy. Calculate it.

7. What is the kinetic energy of a 30 gram ball that is rolling at a speed of 2 meters per second?

8. Two objects were lifted by a machine. One object had a mass of 2000 grams, and was lifted at a speed of 2 m/sec. The other had a mass of 4000 grams and was lifted at a rate of 3 m/sec.
a. Which object had more kinetic energy while it was being lifted? Show your work below.