

Physics 14
1. Problems (at least 10 Problems for)
Energy
1-10-2021

Name: _____

Period: _____

1. The 100 kg hammer of a pile driver is lifted 10 m. What is the potential energy of the system when the hammer is at this height? E = _____

2. A 100 kg shell is shot from a cannon to a height of 400 m.
 - a. What is the potential energy of the shell-shell system when the shell is at 400 m height? E = a. _____

 - b. What is the change in potential energy of the system when the shell falls to a height of 200 m? E = _____

3. In order to charge the plates of a small storage battery, a lead generator is connected through a circuit containing a 120 ohm resistor. A constant force of 1.20 N is applied to the crank as it is turned.
 - a. What is the total work done to charge the plates? E = a. _____

 - b. If work is done on one system, what power is developed? P = _____

4. The storage battery in these circuits generates 40-watt light bulbs. How many batteries can the bulb be used before the battery must be recharged? E = _____