1. A 6.0 kg shell is shot from a cannon to a height of 45 m. What is its potential energy at this height? How much will its potential energy decrease when the shell falls to a height of 15 m?

1. What is the mass of an object that creates 33,750 joules of energy by traveling at 30m/sec?
2. Missy Diwater, the former platform diver for the Ringling Brother's Circus, had a kinetic energy of 12000 J just prior to hitting the bucket of water. If Missy's mass is 40 kg, then what is her speed?
3. An object has a kinetic energy of 25 J and a mass of 34 kg , how fast is the object moving?
4. An object moving with a speed of 35 m/s and has a kinetic energy of 1500 J, what is the mass of the object.
5. An owl has a mass of 4.00 kg. It dives to catch a mouse, losing 800 J of its PE. What was the starting height of the owl, in meters?

Answer: 1)1764 Joules 2)75 kg 3)24.5 m/s 4)1.2 m/s 5)2.4kg 6) 20.4m