

Science Period \_\_\_\_\_

Date \_\_\_\_\_

Mr. Anthony

**Potential and Kinetic Energy PRACTICE PROBLEMS**

1. If a 150 kg troll is sitting on the edge of a bridge 195 meters high, then what is the gravitational potential energy of the troll?
2. A 375 kg abominable snowman is sliding faster and faster down the side of a mountain. At the bottom of the mountain the abominable snowman has an instantaneous velocity of 3 m/s, at this moment what is the kinetic energy of the abominable snowman?
3. Two nuggets of gold with a total mass of 0.4 kg are hanging 0.7 m above the floor, what is the gravitational potential energy of the gold nuggets?
4. Five rocks with total mass of 9.0 kg fall a distance of 1.5 m to the floor in 0.5 s, what is the kinetic energy of the rocks at the moment they first touch the floor?
5. Seven lizards with a mass of 4.7 kg are sitting in the sun, what is the kinetic energy of the lizards?
6. A bowling ball with a mass of 20.0 kg rolls a distance of 8 m in 4.5 s, what is the kinetic energy of the bowling ball when it hits the bowling pins?
7. A Jedi knight on the moon holds a 0.8 kg light saber over their head 3.9 m above the surface of the moon, what is the gravitational potential energy of the light saber?  
(Hint: the gravitational acceleration of the moon is  $1.6 \text{ m/s}^2$ )