**Kinetic Energy**

(Adv)

1. How are work and energy related?
2. How is power related to energy?
3. What are the two basic kinds of energy?
4. What is the formula for calculating an object’s Kinetic Energy (KE)?
5. A girl who weighs 30 kg is inline skating at a speed of 5 m/s. What is the girl’s kinetic energy?
6. Rodger Maris swung a bat which had a mass of 2 kg at a speed of 45 m/s. How many joules of kinetic energy could he give to a ball?
7. Barry Bonds swings a bat which has a mass of 1.5 kg at a speed of 55 m/s. How many joules of kinetic energy could he give to a ball?
8. Which is more important to hitting a home run - a heavier bat or a faster swing?
9. A golf pro swings his driver which weighs 0.75 kg at a velocity of 60 m/s. Calculate the kinetic energy of the club.
10. Calculate the kinetic energy of a car which has a mass of 1000 kg and is moving at the rate of 20 m/s.
11. What is the kinetic energy of a soccer ball which has a mass of 0.8 kg and is kicked at a speed of 10 m/s?
12. Calculate the kinetic energy of a running back that has a mass of 80 kg and is running at a speed of 8 m/s.