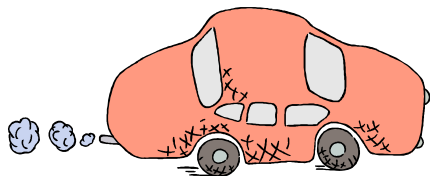


# Kinetic and Potential Energy Practice Problems

Solve the following problems and show your work!



1. A car has a mass of 2,000 kg and is traveling at 28 meters per second. What is the car's kinetic energy?

2. When a golf ball is hit, it travels at 41 meters per second. The mass of a golf ball is 0.045 kg. What is the kinetic energy of the golf ball?



3. The newly developed F-22 Raptor Jet Fighter (something that Mr. DelliGatti worked on in a previous life) weighs approximately 100,000 kg and can travel up to 600 meters per second. What is the kinetic energy of the F-22 jet fighter at this speed?



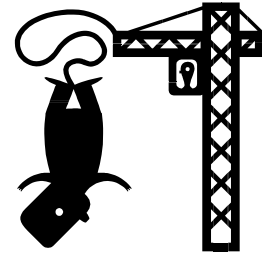
4. If the jet fighter in #3 is traveling at a height of 10,000 meters, what would the potential energy be?
5. A bullet from a policeman's handgun travels at 200 meters per second and has a mass of 0.02 kg. What is the bullet's kinetic energy?

6. If the bullet in problem #6 is traveling 2 meters of the ground, what would the potential energy of the bullet be?

7. Former Minnesota Vikings Quarterback Brett Favre throws a football at a speed of 35 meters per second. If the weight of the football is 0.4 kg, what would the kinetic energy of Brett Favre's pass be?



8. Mr. DelliGatti decides to break the Guinness Book of World Records for bungee jumping. He goes to the Macau Tower in China where the current record is held. After several heart-pounding seconds, he leaps from a height of 233 meters. If my weight is 86 kilograms, what would my potential energy be just prior to jumping?



9. I almost hit the ground but luckily I snap back up towards the top of the building. What was my potential energy just before hitting the ground?

10. Just before snapping back up in the air, my speed is 50 m/s. What is my kinetic energy just before snapping back up?