

Kinetic Energy Warmup

Name: _____ Date: _____

Write the kinetic energy equation in the space below.

1. A 1,030kg car is moving at 24 m/s. Calculate the kinetic energy of the car.

2. A mouse is running at 0.75 m/s. It has a kinetic energy of 0.0140625 J. Calculate the mass of the mouse.

3. Calculate the speed of a 89 kg object that has a kinetic energy of 10,012.5 J (or 10.0125 KJ).

4. Super-Turtle is pushing a 15kg toboggan at 5 m/s. He does 14,000 J of work on the toboggan to accelerate it to a new speed. Calculate this new speed.

5. A 40 kg toy train is moving along a smooth frictionless track. The train then has 92,000 J of work was done on it accelerating it to a speed of 70 m/s. Calculate the initial speed of the train.