Kinetic Energy Questions

Equation: **KE = ½ mv²**

m = mass (kg), v = velocity (m/s)

1. A ball with a mass of 2 kg is rolling at a speed of 3 m/s. What is its kinetic energy?

2. A car with a mass of 800 kg is moving at 20 m/s. Calculate the kinetic energy of the car.

3. A cyclist and bicycle together have a mass of 100 kg and are traveling at 5 m/s. What is their kinetic energy?

4. A dog with a mass of 25 kg runs at a velocity of 4 m/s. Find its kinetic energy.

5. A skateboarder with a mass of 60 kg moves at a speed of 6 m/s. How much kinetic energy does the skateboarder have?

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6. A soccer ball with a mass of 0.45 kg is kicked at a velocity of 15 m/s. Calculate the kinetic energy of the ball.

7. A train car with a mass of 10,000 kg is moving at a speed of 10 m/s. What is its kinetic energy?

8. A small boat with a mass of 500 kg sails at a speed of 8 m/s. Find the kinetic energy of the boat.

9. A runner with a mass of 70 kg is sprinting at 7 m/s. How much kinetic energy does the runner have?

10. A remote-controlled car with a mass of 2.5 kg drives at a speed of 12 m/s. Calculate its kinetic energy.