Introduction to Kinetic and Gravitational Energy

**KINETIC**

1. Find the kinetic energy of a 4.0kg mass moving at 5.0m/s

2. Find the kinetic energy of a 2.0kg mass moving at 8.0m/s

3. Find the kinetic energy of a 12kg mass moving at 4.0m/s

4. Find the kinetic energy of a 0.20kg mass moving at 10m/s

5. Find the kinetic energy of a 6kg mas moving at 13m/s

6. Find the kinetic energy of a 700g object moving at 9m/s

7. Find the kinetic energy of a 2222g object moving at 17m/s

8. Find the kinetic energy of a 820g object moving at 16m/s

9. A 62g mass has a speed of 699m/s. Find its kinetic energy.

10. A 14kg mass is moving at 100km/h. Find the kinetic energy.

11. An 8 kg mass has 100J of kinetic energy. Find the speed.

12. A 12kg mas has 24J of kinetic energy. Find the speed.

13. A 100kg object has 5000J of kinetic energy. Find the speed.

14. A 200g object has 4.9J of kinetic energy. Find its speed.

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**GRAVITATIONAL**

1. A 2.0kg mass is 10m above the ground. What is the gravitational energy?

2. A 5.0kg mass is 4m above the ground. What is the gravitational energy?

3. A 100kg mass is 10m above the ground. What is the gravitational energy?

4. A 0.50kg mass is 3m above the ground. What is the gravitational energy?

5. A 33.744kg mass is 19.621m above the ground. What is the gravitational energy?

6. A 17kg mass is 0.056m above the ground. What is the gravitational energy?

7. A 410g mass is 8m above the ground. What is the gravitational energy?

8. A 2.0kg mass is 97cm above the ground. What is the gravitational energy?

9. A 125g mass is 244cm above the ground. What is the gravitational energy?

10. A 14kg mass has 633J of gravitational energy. What is its height?

11. How high would you need to lift a 1.2kg mass to increase its gravitational energy by 10J?

12. How much would you need to lower a 25kg bag of sand to decrease its gravitational energy by 0.80kJ

13. A mass is raised up 26m. This increased its gravitational energy by 70.07kJ. What is the mass?

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