The Physics of Energy, Explained Simply
&
The Physics of Energy For Beginners

Gravitational Potential Energy Questions

Equation: **GPE = mgh**

m = mass (kg), h = height above the ground (m)

(Gravitational Field Strength g = 9.8 N/kg)

(Also called the Acceleration due to Gravity g = 9.8 m/s^2)

1. A book with a mass of 2 kg is lifted to a shelf 1.5 m high. What is its gravitational potential energy using g = 9.8 N/kg?

2. A basketball with a mass of 0.6 kg is held 2 m above the ground. Calculate its gravitational potential energy using g = 9.8 N/kg.

3. A flower pot with a mass of 3 kg is placed on a windowsill 4 m above the ground. What is its GPE using g = 9.8 N/kg?

4. A cat with a mass of 4.5 kg jumps onto a table that is 0.8 m high. What is the gravitational potential energy using g = 9.8 N/kg?

5. A bag of rice with a mass of 5 kg is lifted onto a counter 1.2 m high. Calculate its GPE using g = 9.8 N/kg.

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6. A child with a mass of 30 kg climbs a 2.5 m high slide. What is the gravitational potential energy using g = 9.8 N/kg?

7. A worker lifts a toolbox weighing 10 kg onto a platform 3 m high. What is the GPE using g = 9.8 N/kg?

8. A snowball with a mass of 0.3 kg rests on a ledge 2.5 m high. Find its GPE using g = 9.8 N/kg.

9. A drone lifts a package of 1.5 kg to a height of 10 m. What is the gravitational potential energy using g = 9.8 N/kg?

10. A painter places a 12 kg can of paint on a scaffold 2 m above the ground. Find its GPE using g = 9.8 N/kg.

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