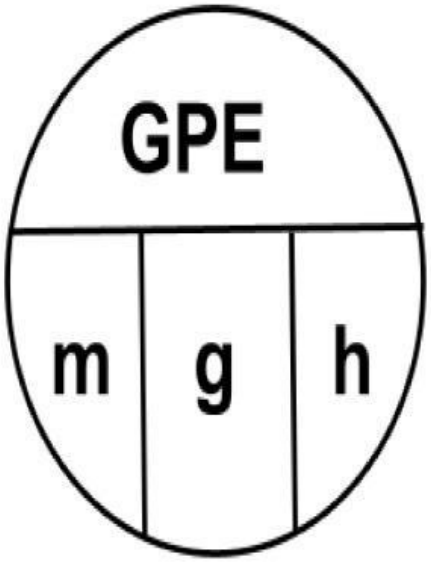
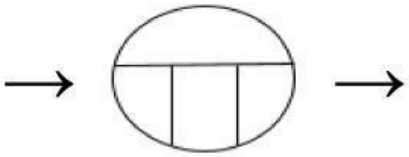
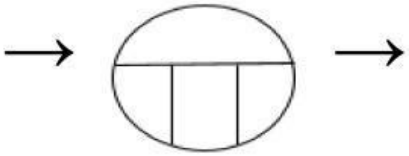


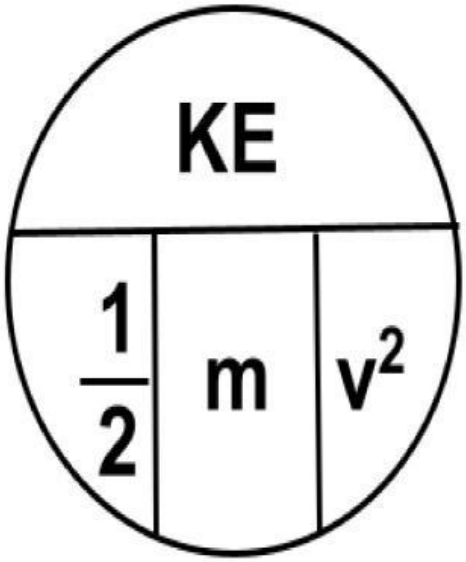
1. A 50 kg mass is held a distance 20 meters above the earth's surface. What is its gravitational potential energy?



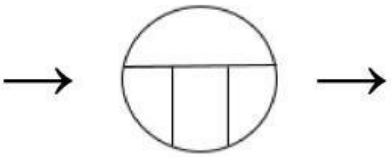
2. A 30 kg object has a gravitational potential energy of 1470 Joules when held above the earth's surface. What is the height of the object?



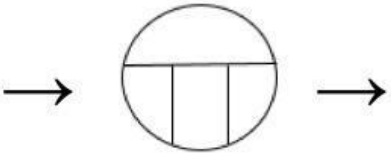
3. A 50 kg object and a 30 kg object are held 10 meters off the ground. Which object has more gravitational potential energy?



4. A 50 kg mass is moving at a speed of 5 m/s on a flat road. What is its kinetic energy?



5. An object with 1500 Joules of kinetic energy is moving with a speed of 10 m/s. What is the mass of the object?



6. Object A has a mass of 10 kg and a speed of 5 m/s. Object B also has a mass of 10 kg but has a speed of 10 m/s. Which object has more kinetic energy?

LIVEWORKSHEETS

$$Mechanical\ Energy = Kinetic\ Energy + Potential\ Energy$$

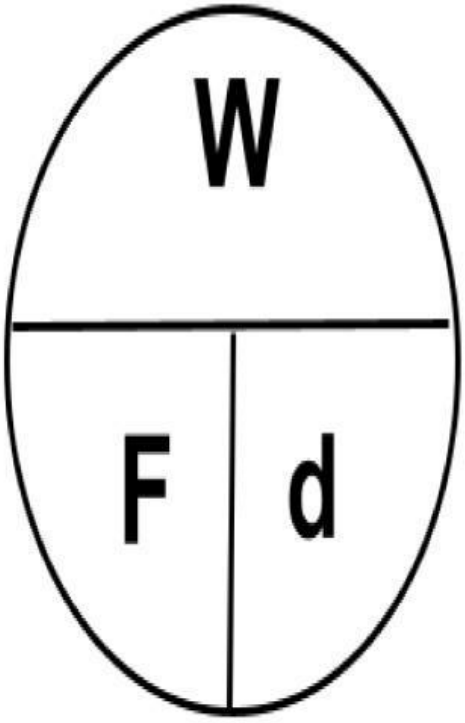
$$ME = KE + GPE$$

7. Object A is held a distance of 12 meters off the ground and has 1500 Joules of Gravitational potential energy and 0 Joules of Kinetic energy. What is the mechanical energy of the object at the instant the ball is dropped.

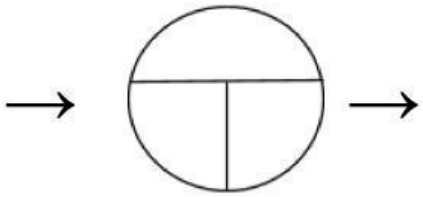
8. Object A as described above has 1500 Joules of mechanical energy before dropped. After falling 4 meters, the ball continues to have 1500 Joules of mechanical energy but only has 1000 Joules of gravitational potential energy. What is the kinetic energy of the ball at this moment in time?

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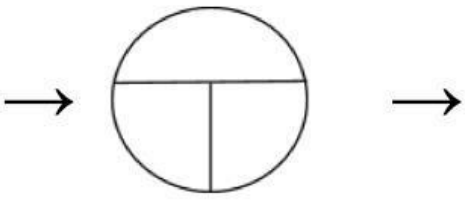
9. The equation for work is given by:



10. A **50 Newton rightward force** displaces an object **4 meters to the right**. What is the amount of work done on the object?



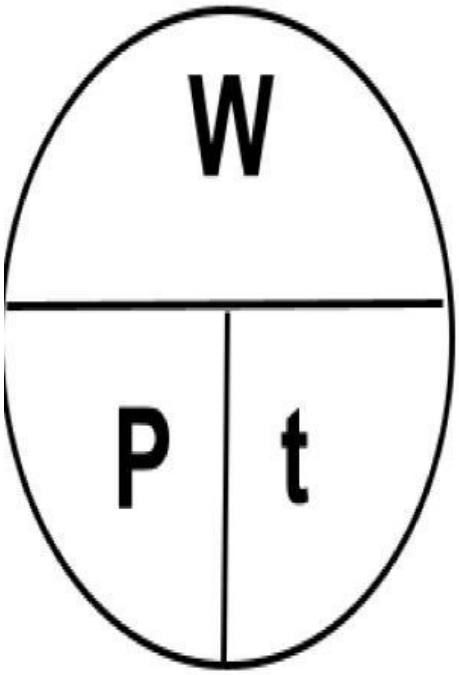
11. A person is displaced 3 meters upward with the addition of 600 Joules of energy by a lift. How much force did the lift apply?



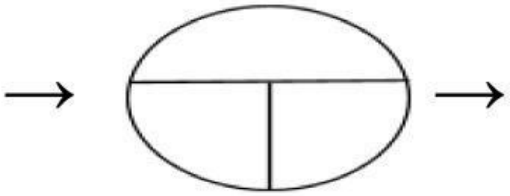
12. A **50 Newton upward force** is needed to hold a tray of food and carry it **4 meters to the right**. What is the amount of work done on the tray of food?

LIVEWORKSHEETS

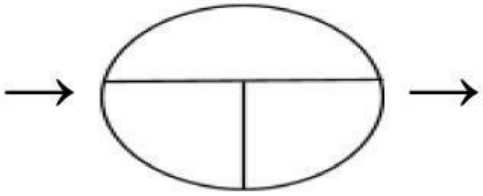
13. The equation for Power is given by:



14. A lift performs 500 Joules of work in lifting an object to a height of 5 meters in 25 seconds. What is the power?



15. A 30 watt motor powers a fan cart as it moves along the floor for 5 seconds. How much work is done on the fan cart by the motor?



LIVEWORKSHEETS