

Work and Energy Quiz PDF

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Which of the following are examples of simple machines? (Select all that apply)

- Lever
- Pulley
- Engine
- Inclined plane

Which of the following is an example of potential energy?

- A moving car
- A compressed spring
- A flowing river
- A spinning wheel

Which of the following are units of energy? (Select all that apply)

- Joule
- Newton
- Calorie
- Watt

Which of the following best describes kinetic energy?

- Energy stored in an object due to its position
- Energy due to motion
- Energy stored in chemical bonds
- Energy due to temperature

What is the SI unit of work?

- Newton
- Joule

- Watt
- Pascal

What is the formula for calculating work done when force and displacement are in the same direction?

- $W = F + d$
- $W = F \times d$
- $W = F - d$
- $W = F/d$

In which of the following scenarios is potential energy involved? (Select all that apply)

- A ball at the top of a hill
- A car accelerating on a highway
- A stretched rubber band
- A boiling pot of water

Which of the following statements about energy are true? (Select all that apply)

- Energy can be created
- Energy can be transformed from one form to another
- The total energy in an isolated system remains constant
- Energy can be destroyed

What is the unit of power in the International System of Units?

- Joule
- Newton
- Watt
- Pascal

Which of the following is a form of mechanical energy?

- Thermal energy
- Nuclear energy
- Chemical energy
- Kinetic energy

What is the formula for gravitational potential energy?

- PE = $\frac{1}{2} mv^2$
- PE = mgh
- PE = F d
- PE = W/t

What does the work-energy theorem state?

- Work is equal to force times time
- Work is equal to the change in kinetic energy
- Work is equal to mass times velocity
- Work is equal to energy divided by time

Which of the following are examples of work being done? (Select all that apply)

- Lifting a book off the ground
- Holding a book stationary above your head
- Pushing a car that doesn't move
- Pull a sled across the snow

Which factors affect the amount of work done on an object? (Select all that apply)

- The force applied
- The displacement of the object
- The time taken to do the work
- The angle between force and displacement