

Work and Energy Quiz Answer Key PDF

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

- A. Lever ✓**
- B. Pulley ✓**
- C. Engine
- D. Inclined plane ✓**

Which of the following is an example of potential energy?

- A. A moving car
- B. A compressed spring ✓**
- C. A flowing river
- D. A spinning wheel

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

- A. Joule ✓**
- B. Newton
- C. Calorie ✓**
- D. Watt

Which of the following best describes kinetic energy?

- A. Energy stored in an object due to its position
- B. Energy due to motion ✓**
- C. Energy stored in chemical bonds
- D. Energy due to temperature

What is the SI unit of work?

- A. Newton
- B. Joule ✓**
- C. Watt
- D. Pascal

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

- A. $W = F + d$
- B. $W = F \times d$ ✓**
- C. $W = F - d$
- D. $W = F/d$

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

- A. A ball at the top of a hill ✓**
- B. A car accelerating on a highway
- C. A stretched rubber band ✓**
- D. A boiling pot of water

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

- A. Energy can be created
- B. Energy can be transformed from one form to another ✓**
- C. The total energy in an isolated system remains constant ✓**
- D. Energy can be destroyed

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

- A. Joule
- B. Newton
- C. Watt ✓**
- D. Pascal

Which of the following is a form of mechanical energy?

- A. Thermal energy
- B. Nuclear energy

C. Chemical energy

D. Kinetic energy ✓

What is the formula for gravitational potential energy?

A. $PE = \frac{1}{2} mv^2$

B. $PE = mgh$ ✓

C. $PE = F d$

D. $PE = W/t$

What does the work-energy theorem state?

A. Work is equal to force times time

B. Work is equal to the change in kinetic energy ✓

C. Work is equal to mass times velocity

D. Work is equal to energy divided by time

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

A. Lifting a book off the ground ✓

B. Holding a book stationary above your head

C. Pushing a car that doesn't move

D. Pull a sled across the snow ✓

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

A. The force applied ✓

B. The displacement of the object ✓

C. The time taken to do the work

D. The angle between force and displacement ✓