

Energy Test Review

[Relationships/Plots](#)

$$KE = 1/2 mv^2$$

$$PE = mgh$$

KE and m



KE and v



PE and m



PE and h

$PE = 1/2 kx^2$ PE and x - Relationship? _____

3. Know your [units](#) Power _____ Work _____ Energy _____ Spring Constant _____

Energy changes when an object falls: Practice Problems: [Conservation of Energy - Free Fall](#)

20 m		PE = 64J	KE = 0
		PE =	KE = 20J
10 m		PE =	KE =
		PE =	KE =

4. The Law of Conservation of Energy states that energy cannot be _____

As an object falls the sum of the KE and PE _____

5. Everything in the energy unit is a [scalar or vector](#)?

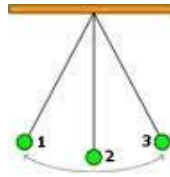
Vector (V) or Scalar (S) ?

a) Power _____ Work _____ KE _____ PE _____

b) If the velocity of an object is tripled, its kinetic energy will _____

6. Know the PE and KE changes in a [pendulum](#)

a. The potential energy is maximum at



b. The KE is at its maximum at:

c. The PE at 1 is equal to the PE at:

d. The PE at 1 is equal to the KE at:

Work Fill-ins

7a. Work is being done when a force causes an object to in the direction of the force.

7b. There are two ways to increase your power: Do more work in the time or do the same work in time.

7c. The applied force on an spring is directly proportional to the stretch it produces.

7d. Power is the amount of work done per unit .

8. How much work is done when a ball weighing 20 N is lifted a vertical distance of 2 meter?

a) What kind of energy does the ball acquire? _____ How much? _____

9. An object moving at a constant speed of 4 m/s possesses 160 J of K.E.. What is the objects mass?

10. As an object falls its KE _____ and its PE _____. As the object falls the amount of PE that is lost is equal to the amount of _____ gained.

11. Sketch the shape of a F vs. stretch plot for an **IDEAL SPRING**.

12. A one meter spring is stretched to 1.2 m by a force of 6 N. Find the spring constant of this spring. (include units)

13. Power is the time rate of doing _____

Try <http://www.123physics.com> for more practice questions