

## 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](#)?

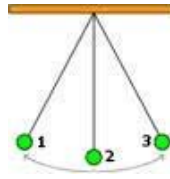
Vector (V) or Scalar (S) ?

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