

Module Test: Energy and Motion

1) Which is kinetic energy?

- ☐ the energy of a moving object
- ☐ energy that is increasing
- ☐ energy that is decreasing
- ☐ energy that is stored in the position, or structure, of an object

2) Another name for stored energy is _____ energy.

3) The law of conservation of energy states that energy cannot be _____ or _____.

- ☐ gained; released
- ☐ used; wasted
- ☐ created; destroyed
- ☐ heated; frozen

4) Fill in the blanks using the available answer choices.

As the amount of force on an object increases, the acceleration of the object

(blank 1)

Blank 1 options

- increases
- decreases

5) Which best describes the type of energy that a bike has when it travels on a flat sidewalk?

- ☐ kinetic energy
- ☐ potential energy
- ☐ sound energy
- ☐ chemical energy

6) The amount of kinetic energy an object has is related to its mass and _____.

7) Fill in the blanks using the available answer choices.

The skateboarder will not stop unless acted upon by _____.

(blank 1)



Blank 1 options

- balanced forces
- unbalanced forces

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8) If two puppies pull on a plastic ring with equal force, the ring does not move. This is an example of _____.

- ☐ balanced forces
- ☐ unbalanced forces
- ☐ acceleration
- ☐ friction

9) When an elevator is accelerating upward in a building, there are unbalanced forces acting on it.

- ☐ True
- ☐ False

10) How does the energy change when work is done on an object?

11) Fill in the blanks using the available answer choices.

Velocity is measured using the _____ and _____ of an object.

(blank 1)

(blank 2)

Blank 1 options

- speed
- inertia

Blank 2 options

- direction
- force

12) A horse that is accelerating is _____.

- ☐ standing still
- ☐ maintaining its speed
- ☐ decreasing in weight
- ☐ slowing down

13) Fill in the blanks using the available answer choices.

The more friction between colliding objects, the _____ heat produced during a collision.

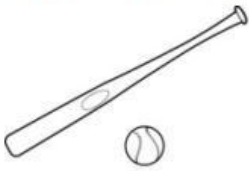
(blank 1)

Blank 1 options

- more
- less

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- 14) Use the example of a baseball and bat to describe the forces acting on the baseball before and at the moment it comes in contact with the bat.



- 15) Which force will stop a moving truck?

- ☐ friction
- ☐ inertia
- ☐ newtons
- ☐ balanced forces

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- 16) A student wanted to find out how much energy of motion would be needed to move a marble that was at rest. She set up the following investigation:



What data should she gather?

- ☐ what the temperature is that day
- ☐ how fast the marble travels
- ☐ what colors the marbles contain
- ☐ how many boys and girls are helping

- 17) Describe an example when kinetic energy is transferred between objects.

- 18) Which has the most kinetic energy?

- ☐ a wagon moving at 2 meters/second
- ☐ a wagon moving at 4 meters/second
- ☐ a wagon moving at 6 meters/second
- ☐ a wagon moving at 8 meters/second