

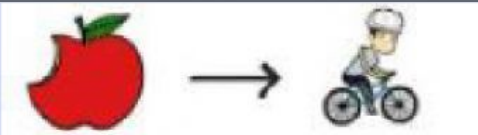

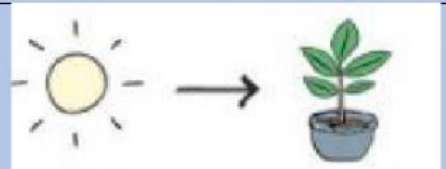
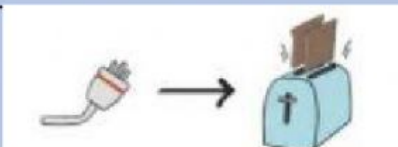
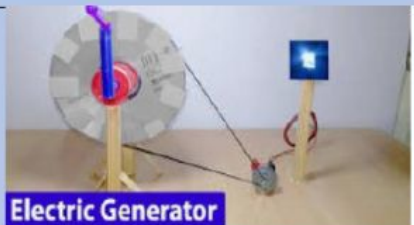
<b>First Name:</b>	<b>Last Name =</b>	<b>Period:</b>	<b>Date:</b>	<b>School</b> _____
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## Force, Motion, Energy Resources and Transformation

### Bassett Test Review II

#### Question 1

**Instructions:** Join with the line the picture with correct energy transformation

<u>Picture</u>	<u>Energy Transformation</u>
	>Chemical to mechanical
	>Radiant Light to chemical
	>Electrical to heat
	>Mechanical to light
 Electric Generator	>Electrical to light

## Question 2

***The law of Conservation of energy:***

The law of conservation of energy states energy cannot be created or destroyed but may be changed from one form to another.

**Instructions:** Use the above statement to complete the missing parts.

The law of \_\_\_\_\_ of \_\_\_\_\_ states \_\_\_\_\_ be created or \_\_\_\_\_ but may be \_\_\_\_\_ from one \_\_\_\_\_ to \_\_\_\_\_.

## Question 3

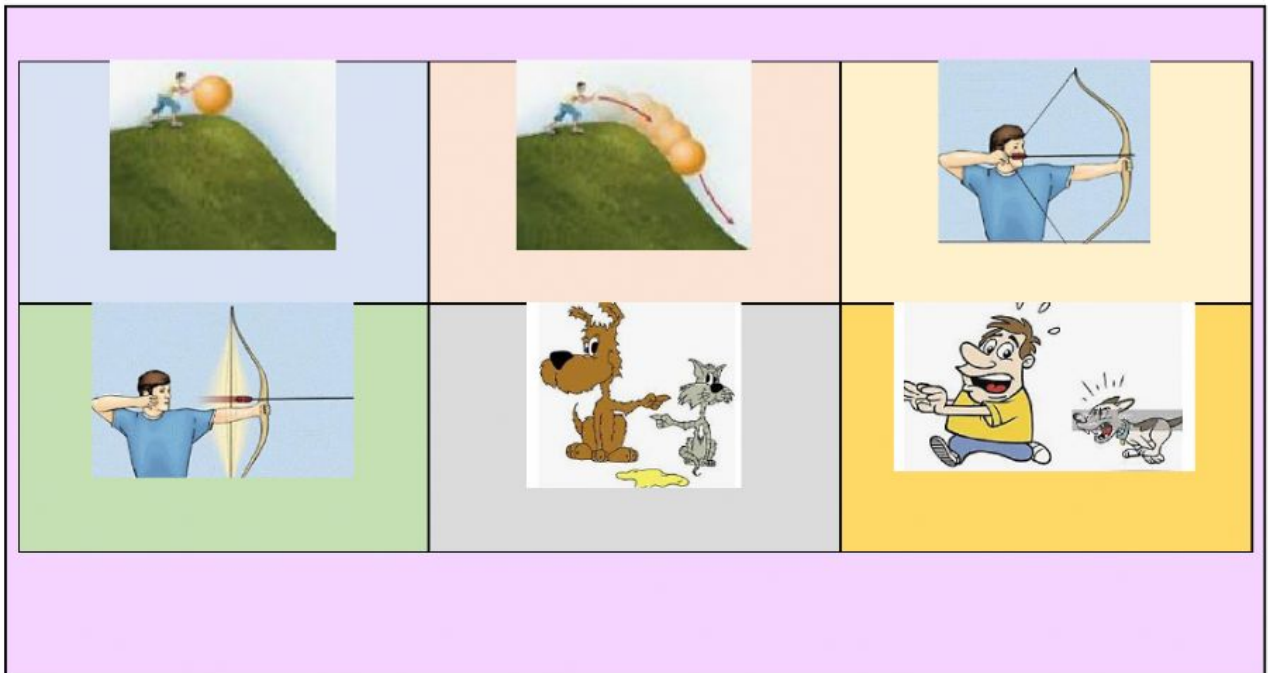
### **Potential Energy:**

- **Stored energy**
- **The higher an object is at, the more Potential energy**

### **Kinetic Energy:**

- **Released energy**
- **The faster an object is going, the more Kinetic energy**

**Instructions:** Label “potential energy” or “kinetic energy”



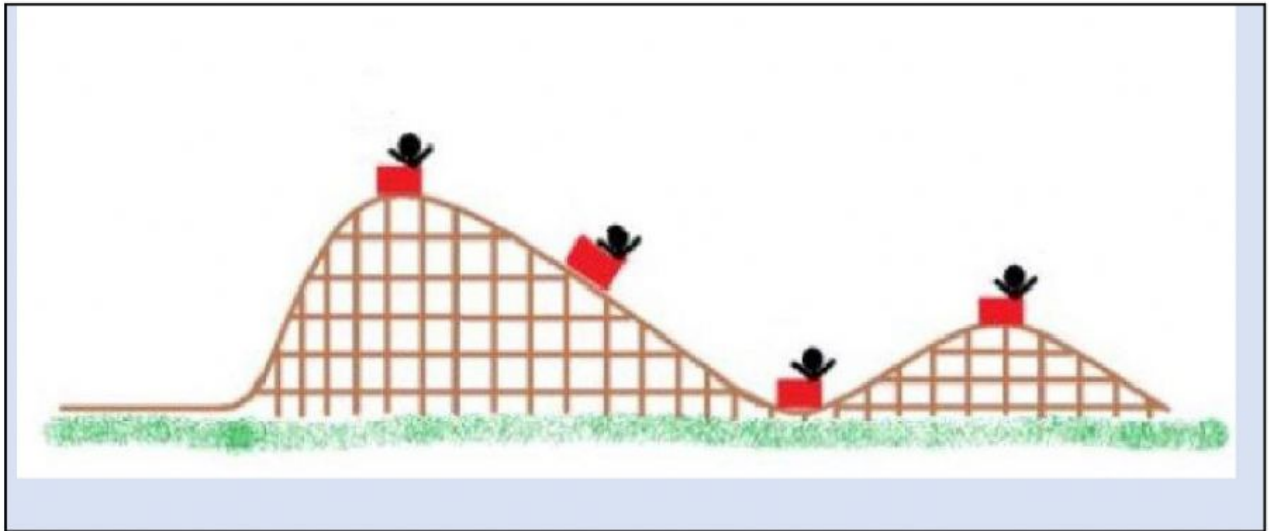
## Question 4

### Hint:

- >The higher the more PE
- > the faster the more KE

**Instructions:** Use the labels **A**, **B**, **C** and **D** to label the correct Potential and kinetic energy “amount” on the picture

A	B	C	D
KE=100 max PE = none	KE = none PE=100 max	KE= 50% PE=50 %	KE= 75% or $\frac{3}{4}$ PE= 25% or $\frac{1}{4}$



### Questions 5 (from yesterday)

**Inertia:** the bigger – the more difficult to stop-the more inertia

**Energy:** the bigger – the more energy- the more inertia

4-1. Which object has more energy -Inertia and more difficult to stop?

- a) huge truck   b) bike   c) toy car

4-2. Which object would be more difficult to move from start because it has more inertia)?

- a) huge truck   b) bike   c) toy car

4-3. Which is true

- a) Heavy objects have less inertia      b) heavy object have more inertia

4-4. Which object have less Inertia

- a) real airplane      b) paper airplane

4-5. Which object would have more Potential energy?

- a) an airplane flying 2 miles above      b) an airplane flying 7 miles above

$$\text{Speed} = \frac{d}{t}$$

### Example

**Instructions:** Plug in the numbers inside the boxes and divide to find the answer

**Find the Speed (S)** ----- **Scalar quantity** (It has **no** direction)

**S (Speed)** = ?

**d** (distance) = 40 meters

**t** (time) = 5 seconds

$$S = \frac{\boxed{d}}{\boxed{t}} = \frac{\boxed{40 \text{ meters}}}{\boxed{5 \text{ seconds}}} = \boxed{8 \text{ meters/second}}$$

### Question 6

**Plug in the numbers inside the boxes and divide to find the answer**

**Evaluate the Speed (S)**

**S (Speed)** = ?

**d** (distance) = 800 miles

**t** (time) = 5 hours

$$S = \frac{\boxed{d}}{\boxed{t}} = \frac{\boxed{\phantom{000000}}}{\boxed{\phantom{000000}}} = \boxed{\phantom{000000}}$$



## Question 7

Plug in the numbers inside the boxes and divide to find the answer

Evaluate the Speed (**S**)

**S** (Speed) = ?

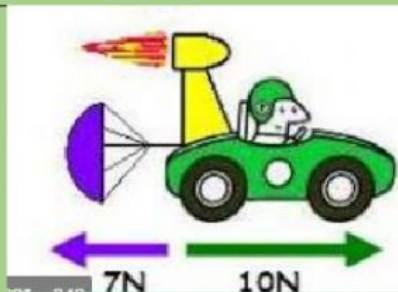
**d** (distance) = 48 meters

**t** (time) = 8 seconds

$$S = \frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}} = \frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}} = \boxed{\phantom{0000000}}$$

## Question 8

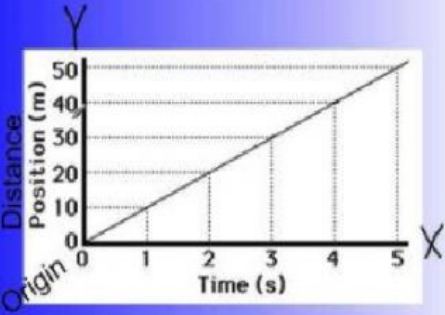
Write “*balance*” or “*unbalance*” forces



## Question 9

Use graphs to find the **distance**, the **time**, and the **speed**

Distance-Time Graph of a Car



The graph shows a straight line starting from the origin (0,0) and passing through points (1,10), (2,20), (3,30), (4,40), and (5,50). The vertical axis is labeled 'Distance Position (m)' and the horizontal axis is labeled 'Time (s)'. The origin is marked 'Origin'.

Time (s)	Distance (m)
0	0
1	10
2	20
3	30
4	40
5	50

**Find the average speed**

**Step 1 : Distance at 5 sec**

**Step 2: Time at 50 meters**

**Step 3:**

$$\text{speed} = \frac{\text{distance}}{\text{time}}$$

## Question 10



**Which path-trajectory of the cannon ball is correct?**



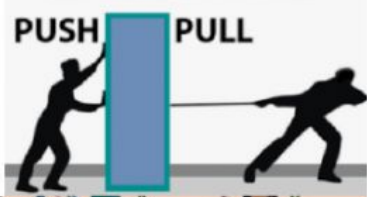

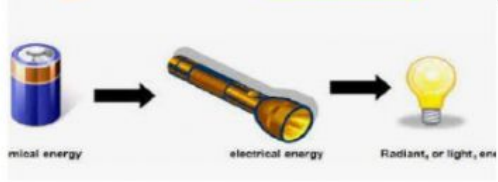
- a) first the ball speeds up and it never stops
- b) first speeds up, then it slows down at the top, change direction, and finally speeds up until it hits the ground.
- c) Ask Alexa, Google, Siri or your teacher

## Question 11

### Vocabulary

Match the word with the definition by writing the correct letter

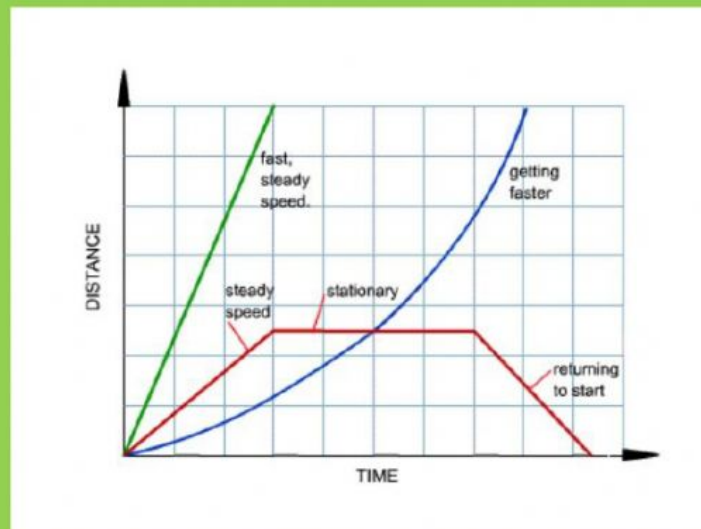
Word
1. X-axis
2. Force
3. Y axis
4. Unbalanced
5. Friction
6. Energy transformation
7. Potential Energy
8. Kinetic Energy
9. Inclined plane
10. Speed formula

Definition
Vertical Line
Energy stored
Energy of motion

Horizontal line
$Speed = \frac{d}{t}$







## Question 12

### Practice: Understanding the distance vs time graph



**Instructions:** Use the graph on top to label the missing parts

