أسئلة مراجعة نهائية منهج انسباير

موقع المناهج ⇦ المناهج الإماراتية ⇦ الصف التاسع العام ⇦ علوم ⇦ الفصل الثاني ⇦ ملفات متنوعة ⇦ الملف

تاريخ إضافة الملف على موقع المناهج: 2025-02-15 06:53:05

المزيد من مادة علوم:	ملفات ا كتب للمعلم ا كتب للطالب ا اختبارات الكترونية ا اختبارات ا حلول ا عروض بوربوينت ا أوراق عمل منهج انجليزي ا ملخصات وتقارير ا مذكرات وبنوك ا الامتحان النهائي ا للمدرس

التواصل الاجتماعي بحسب الصف التاسع العام

صفحة المناهج الإماراتية على فيسبوك					
المواد على تلغرام	التربية الاسلامية	اللغة العربية	اللغة الانجليزية	الرياضيات	

المزيد من الملفات بحسب الصف التاسع العام والمادة علوم في الفصل الثاني

1	عرض بوربوينت الدرس الأول المادة والطاقة الحرارية من الوحدة السادسة
2	عرض بوربوينت درس الآلات
3	عرض بوربوينت درس السرعة الزخم والتزاحم
4	عرض بوربوينت درس النظائر
5	أسئلة الامتحان النهائي الورقي بريدج

UNITED ARAB EMIRATES
MINISTRY OF EDUCATION

نحن الإمارات
WE THE UAE 2031

2024-2025

Inspire Physical Science

UAE Edition
Grade 9 General

الحلول هنا

تاسع عام – مراجعه الهيكل

الفصل الثاني-2025

أ/أدهم زوين

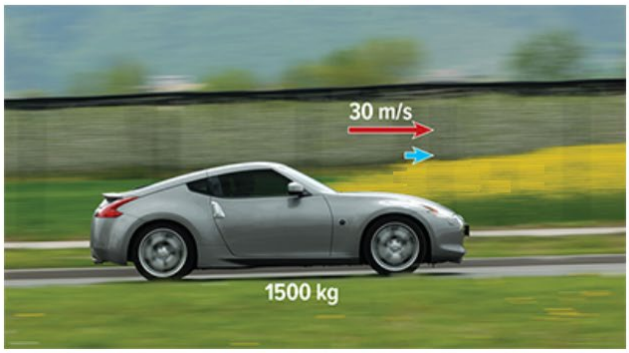
0505084733

Inspire Science 9 G EOT-2

مراجعة الهيكل علوم تاسع انسبير

Paper part

A



B

A. Calculate the momentum of the car.

.....

.....

B. Calculate the momentum of the truck

.....

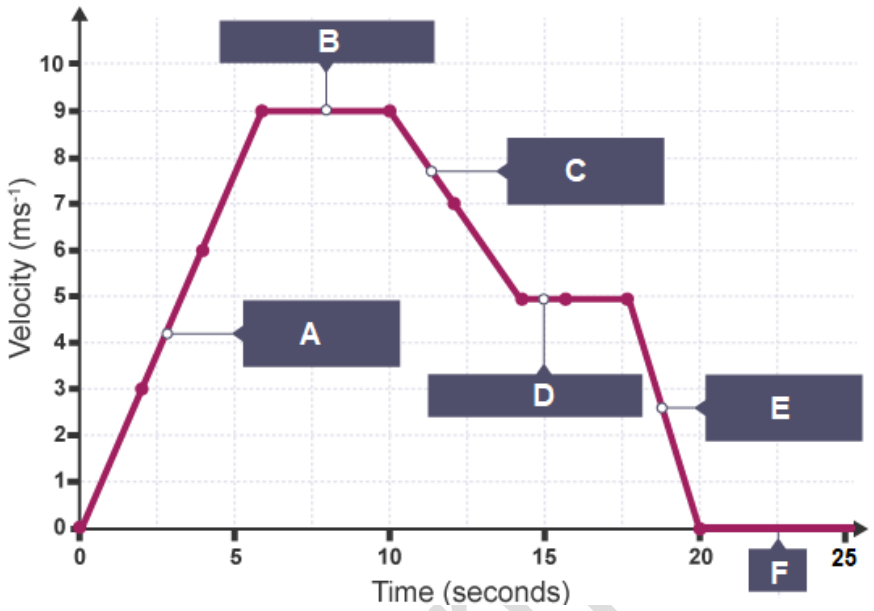
.....

C. Compare between the momentum of both the car and the truck

.....

.....

The following figure shows the speed-time graph of Khaled's car as she drives to the store. The intervals are labelled from A to F to describe Khaled's car motion. Answer the following questions.



1. Which intervals indicate Khaled has stopped at a traffic red light?

.....

.....

2. What are the intervals during which Khaled's car is not accelerating, but still moving at constant speed? (Give two.) :

.....

.....

3. What are the intervals that indicate the car is slowing down? (Give two.)

.....

.....

4. Calculate the acceleration for the time interval E.

.....

.....

1. A passenger elevator travels from the first floor to the 60th floor, a distance of 210 m, in 35 s. What is the elevator's speed?

   $s = d / t$

   $s = 210\ m / 35\ s$

   $s = 6.0\ m/s$

2. A motorcycle is moving at a constant speed of 40 km/h. How long does it take the motorcycle to travel a distance of 10 km?

   $t = d / s$

   $t = 10\ km / 40\ km/h$

   $t = 0.25\ h\ (or\ 15\ min)$

3. How far does a car travel in 0.75 h if it is moving at a constant speed of 88 km/h?

   $d = st$

   $d = 88\ km/h \times 0.75\ h$

   $d = 66\ km$

4. A long-distance runner runs at a constant speed of 5 m/s. How long does it take the runner to travel 1 km?

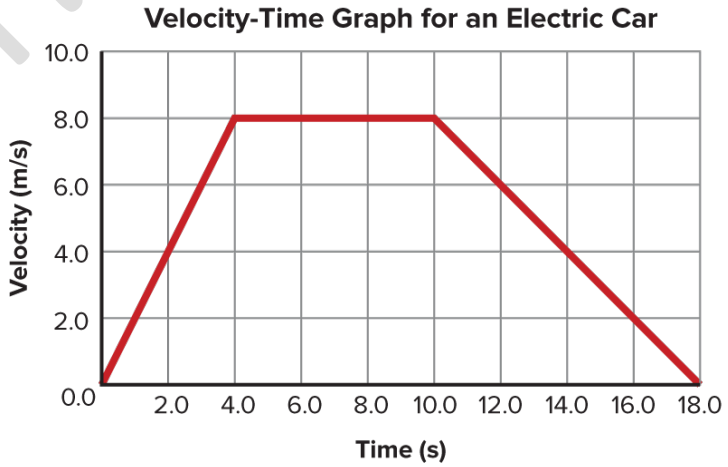
   $t = d / s$

   $t = (1\ km \times 1{,}000\ m/km) / 5\ m/s$

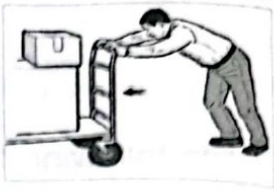
   $t = 1{,}000\ m / 5\ m/s$

   $t = 200\ s$

From the following velocity time curve, what is the acceleration between 4 to 10 seconds



An object is pushed with a horizontal force of **60 N** and moves a distance of **5 m** across the floor as seen in the figure. How much work is done?

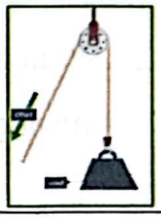


How much work is done when an **80–N** baby is held up and moved at a constant speed for a distance of **10 m horizontally**?

.....

.....

The input work on a pulley system is **75 J**. If the pulley system is **84** percent efficient, then what is the output work from the pully system?



.....

.....

What is the mechanical advantage of the hammer in the following figure, if the input force is **125 N** and the output force is **2000 N**?

.....

.....

List methods of transferring heat energy

1. .....

2. .....

3. .....

Complete the following table using the following:

Yes- No- direct contact of particles- Sunlight warming the Earth - electromagnetic waves.

	Description	Medium Required?	Example
Conduction	Transfer of heat through	....	A metal spoon heating up in hot soup.
Convection	Heat transfer through fluid movement due to density differences.	Yes (liquids, gases)	Boiling water or warm air rising.
Radiation	Transfer of energy through	....	....

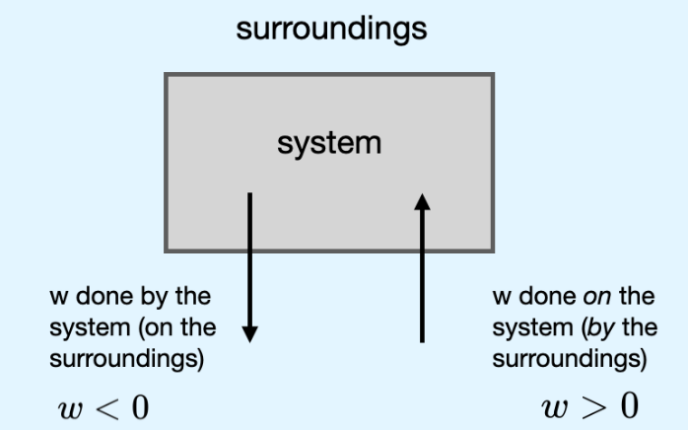
First Law of Thermodynamics states that:

.....

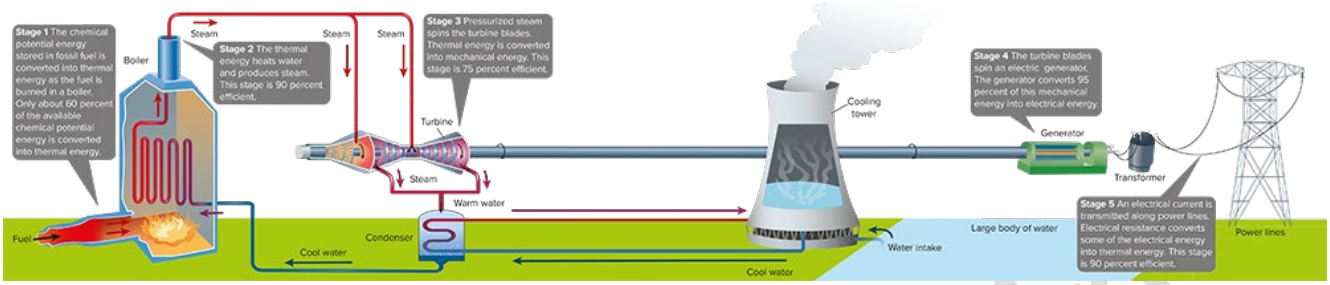
.....

.....

	First Law of Thermodynamics	Second Law of Thermodynamics
Statement	The increase in thermal energy of a system equals the sum of heat added and work done on the system.	Energy spontaneously transfers from a hotter object to a cooler one, never the reverse naturally.

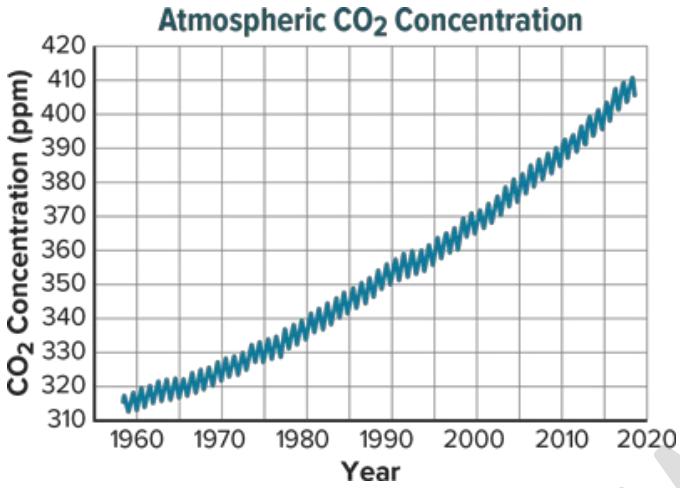


	Work Done ON the System	Work Done BY the System
Definition	Energy is transferred **into** the system, increasing its internal energy.	Energy is transferred **out of** the system, decreasing its internal energy.
Effect on System	Internal energy **increases**.	Internal energy **decreases**.
Effect on Surroundings	Surroundings **lose** energy.	Surroundings **gain** energy.
Sign Convention	Work is **positive** (W > 0).	Work is **negative** (W < 0).
Example	Compressing a gas in a piston.	Expanding gas pushing a piston outward.



A B C D E

Stage	Process Description	Energy Conversion
1. Combustion	Fossil fuels (coal, oil, or natural gas) are burned in a boiler, releasing heat energy.	Chemical → Thermal
2. Steam Generation	Water absorbs the thermal energy and turns into high-pressure steam.	Thermal → Mechanical
3. Turbine Rotation	The pressurized steam spins a turbine, converting thermal energy into mechanical energy.	Thermal → Mechanical
4. Electricity Generation	The turbine is connected to a generator, which converts mechanical energy into electrical energy.	Mechanical → Electrical
5. Transmission	Electrical energy is transmitted through power lines to homes and businesses.	Electrical → Usable Power



List 3 disadvantages of using nonrenewable energy resources (fossil fuels)

1. .....

2. .....

3. .....

Disadvantages of Using Nonrenewable Energy (Fossil Fuels)

1. **Environmental Pollution**.
2. **Greenhouse Gas Emissions**
3. **Resource Depletion**
4. **Oil Spills**

Predicted Effects on the Environment in the Future

Increase in Carbon Dioxide Levels

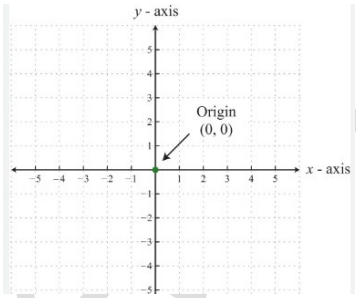
a- Higher global temperatures
b- Ocean Acidification

Inspire Science 9 G EOT-2

مراجعة الهيكل علوم تاسع انسبير

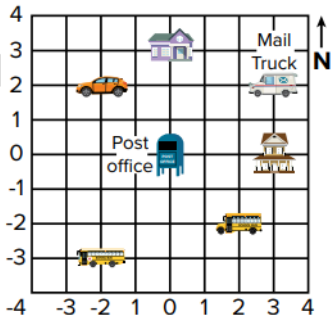
MCQ part

In a coordinate system, how are the x-axis and y-axis arranged?



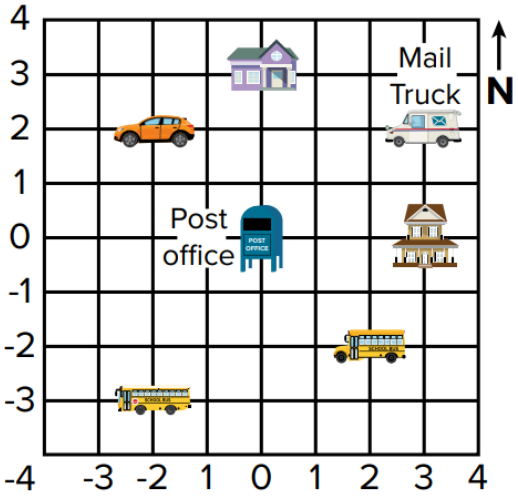
A. Parallel to each other
B. At an acute angle
C. Perpendicular to each other
D. Opposite to the reference point

In the given map, what direction does the **y-axis** represent?



A. North-South
B. East-West
C. South-East
D. West-North

What is the position of the mail truck relative to the post office?



A. 3 blocks west and 2 blocks south
B. 2 blocks west and 3 blocks north
C. 3 blocks east and 2 blocks north
D. 2 blocks east and 3 blocks south

What is displacement?

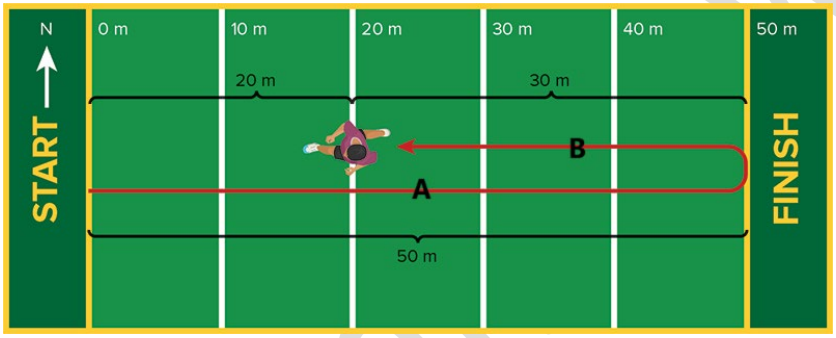
A. The total path travelled by an object

B. is the distance and direction of an object's change in position

C. The speed and time of an object's motion

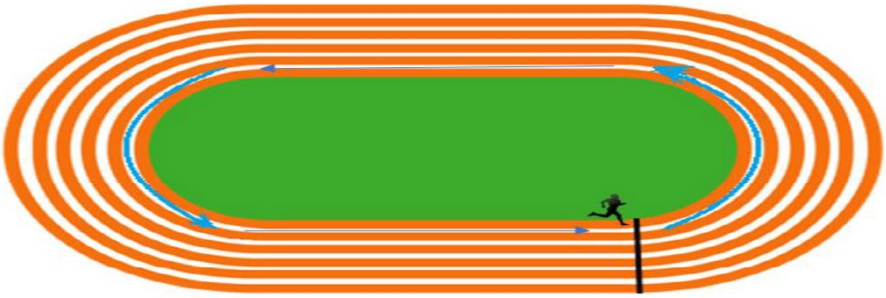
D. The overall movement measured in blocks

From the following Fig Find distance and displacement from start to the end of red arrow



	Displacement	Distance
A	20	80
B	0	50
C	20	80
D	0	20

"A runner at a track meet completes exactly one lap around a 400 m track.



What is the runner's distance and displacement travelled in a complete one lap?

A. The runner's travelled distance is 400 m, and his displacement is 0 m

B. The runner's travelled distance is 300 m, and his displacement is 100 m

C. The runner's travelled distance is 0 m, and his displacement is 400 m

D. The runner's travelled distance is 200 m, and his displacement is 200 m

---

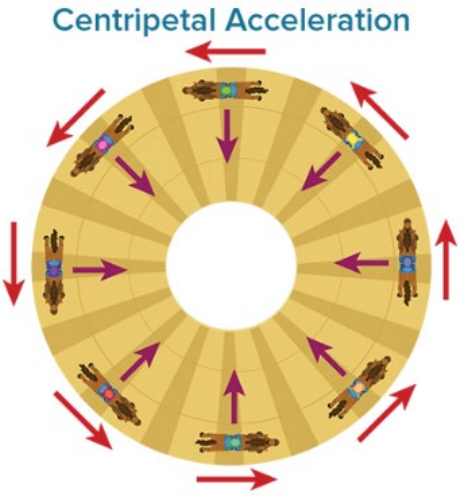
1. Why is a horse on a carousel considered to be accelerating?

A) Because its mass is increasing

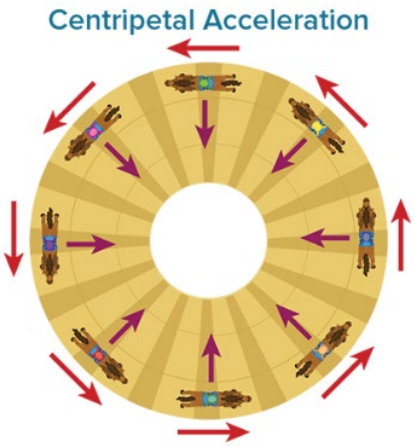
B) Because its velocity is changing due to a constant change in direction

C) Because its speed is increasing

D) Because it is not moving



What is the name of the acceleration that acts toward the center of a curved or circular path?



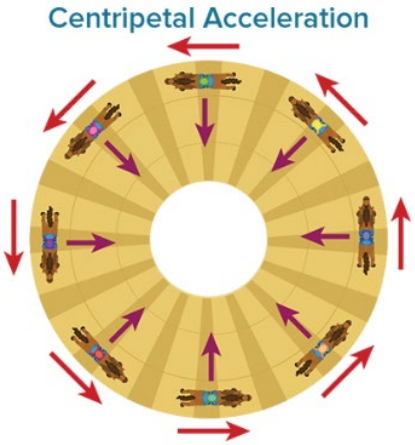
A) Gravitational acceleration

B) Centrifugal acceleration

C) Centripetal acceleration

D) Linear acceleration

What is the direction of the acceleration of the horse on the carousel?



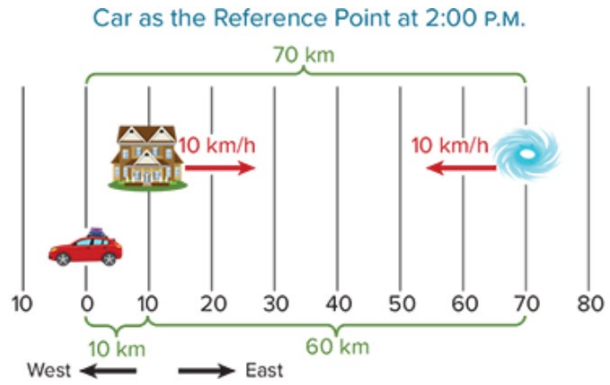
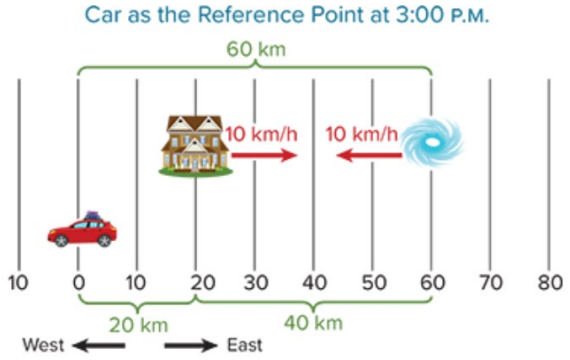
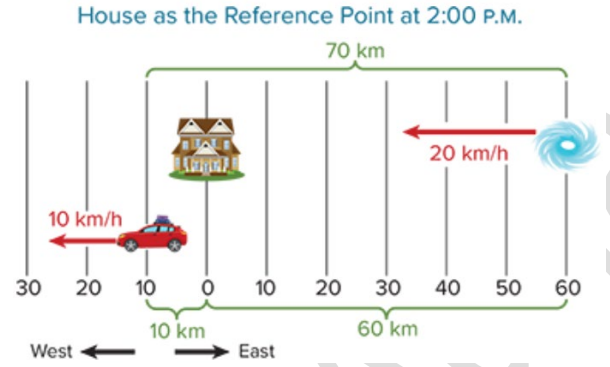
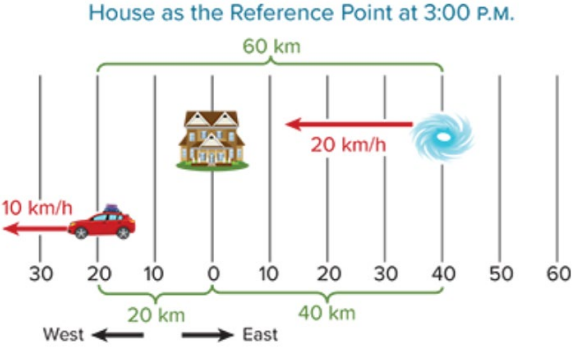
A) Tangent to the circular path

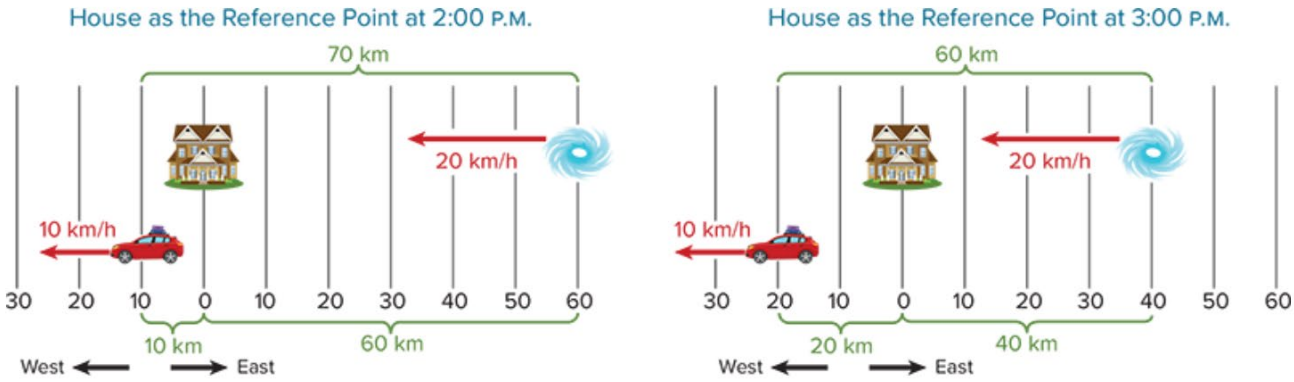
B) Outward from the center of the carousel

C) Perpendicular to the velocity and directed toward the center

D) In the same direction as the velocity

Study the figures below, the house is the reference point, which of the following figures represent the car movement at velocity = 10 km/h west, and 20 km away from its reference point?

A	B
	
C	**D**
	



At 2.00 pm the distance between the hurricane and the car was 70 km after 1 hr the distance became 60 km. How many hours from 2.00 pm the hurricane will reach the car?

A- 3 Hours
B- 5 Hours
C- 7 Hours
D- 9 Hours

What is the study of the relationships among thermal energy, heat, and work called?

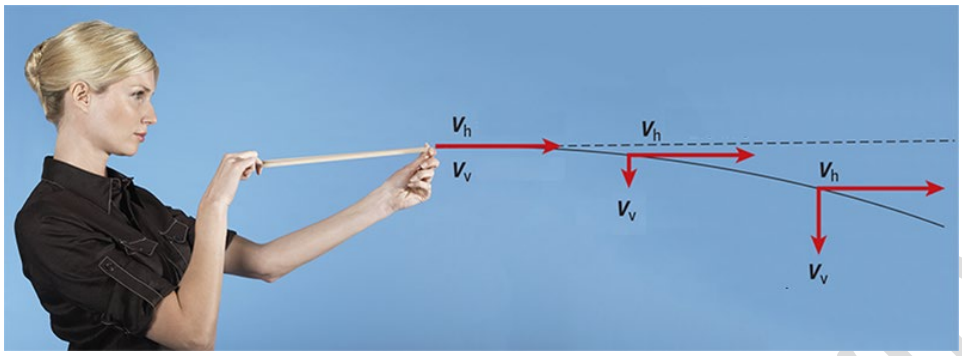
A) Thermodynamics

B) Kinematics

C) Quantum Mechanics

D) Electrodynamics

How does gravity affect a projectile's motion?



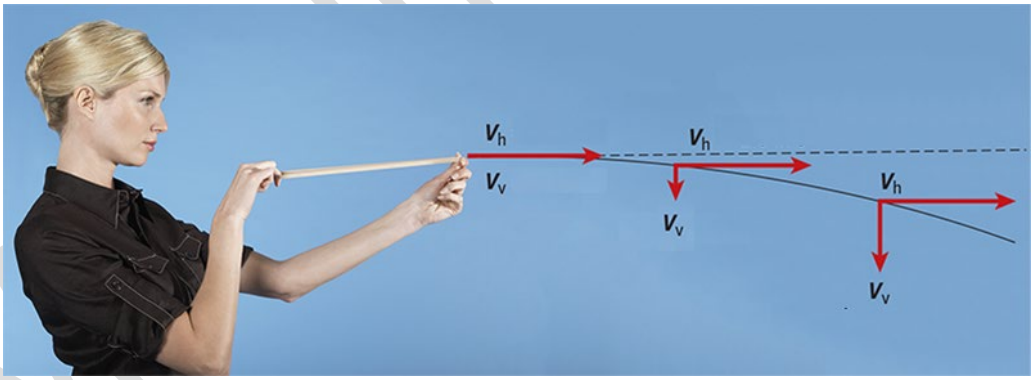
A) It accelerates the projectile downward, increasing its vertical velocity

B) It slows down the projectile's horizontal motion

C) It causes the projectile to move in a straight line

D) It only affects the projectile at the start of its motion

which true about horizontal and vertical motion?



	Horizontal motion	Vertical motion
A	Change velocity	Change velocity
B	Change velocity	Constant velocity
C	Constant velocity	Change velocity
D	Constant acceleration	No acceleration

which is the following not simple machine?

A. Wedge B. Screw c. inclined plane D. scissors

How does an inclined plane make work easier?

A) By increasing the force needed to move an object

B) By reducing the effort force required to lift an object

C) By changing the direction of the applied force

D) By reducing the weight of the object

Which cannot be done by a machine?

A) increase force

B) increase work

C) change direction of a force

D) increase velocity

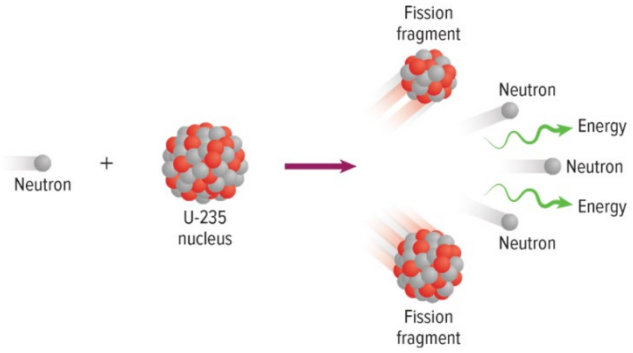
Which nuclear reaction is shown in the following figure?

a) Fusion

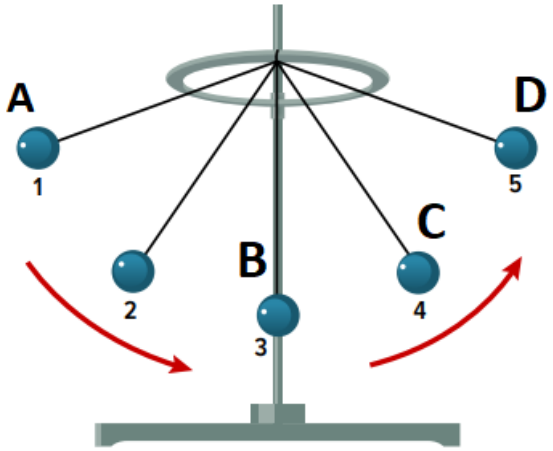
b) Fission

c) Synthesis

d) Combustion



The kinetic energy greatest (object fastest) at .....



Which of the following is the correct formula for kinetic energy?

A) $KE = mv^2$

B) $KE = mgh$

C) $KE = F \times d$

D) $KE = \frac{1}{2}mv^2$

A car has a mass of 1,000 kg and is moving with a velocity of 20 m/s. What is its kinetic energy?

A) 100,000 J

B) 200,000 J

C) 400,000 J

D) 40,000 J

Kinetic energy is energy due to motion and depends on the mass and speed of an object, according to the equation:

Kinetic energy (in joules) $KE = \frac{1}{2}mv^2$

If the mass of an object is doubled, how will it affect the kinetic energy?

A. Kinetic energy will increase by double

B. Kinetic energy will increase by a factor of 4

C. Kinetic energy will decrease by a factor of $\frac{1}{4}$

D. Kinetic energy will decrease by a factor of $\frac{1}{2}$

Kinetic energy is energy due to motion and depends on the mass and speed of an object, according to the equation:

Kinetic energy (in joules) $KE = \frac{1}{2}mv^2$

If the velocity of an object is doubled, how will it affect the kinetic energy?

A. Kinetic energy will increase by double

B. Kinetic energy will increase by a factor of 4

C. Kinetic energy will decrease by a factor of $\frac{1}{4}$

D. Kinetic energy will decrease by a factor of $\frac{1}{2}$

Which of the following is the correct formula for potential energy?

A) GPE = mg

B) GPE = mgh

C) GPE = F × d

D) GPE = $\frac{1}{2}mv^2$

The type of potential energy stored in a vase placed on a bookcase shelf is....

A. Gravitational potential energy

B. Electric potential energy

C. Chemical potential energy

D. Elastic potential energy

Which of the following best states the Law of Conservation of Energy?

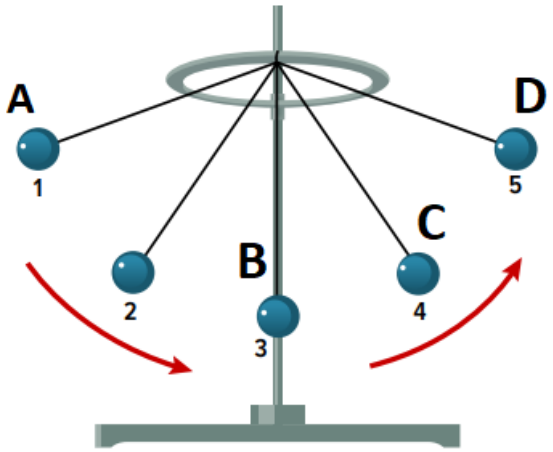
A) Energy can be created and destroyed.

B) Energy can be transformed from one form to another, but the total energy remains constant.

C) Energy is always increasing in a system.

D) Energy can only exist in the form of kinetic energy.

Which of the following is TRUE when the object is moving from A → B?



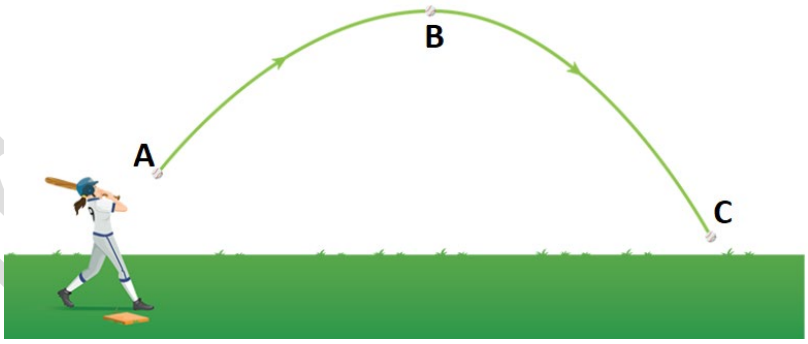
A) KE increases, GPE decreases

B) KE decreases, GPE increases

C) KE and GPE remain constant

D) Both KE and GPE decrease

Which of the following is TRUE when the object is moving from A → B?



A) KE increases, GPE decreases

B) KE decreases, GPE increases

C) KE and GPE remain constant

D) Both KE and GPE decrease

Which of the following materials has the fastest increase in temperature when heat is applied?

Substance	Specific Heat [J/(kg·°C)]
Water	4,200
Wood	1,700
Sand	830
Carbon (graphite)	710
Iron	450

A) Water

B) Wood

C) Sand

D) Iron

The air in a room has a mass of 50 kg and a specific heat of 1,000 J/(kg·°C). What is the change in thermal energy of the air when it warms from 20°C to 30°C?

A) 500,000 J

B) 100,000 J

C) 50,000 J

D) 1,000,000 J

The temperature of a 2.0-kg block increases by 5°C when 2,000 J of thermal energy are added to the block. What is the specific heat of the block?

A) 400 J/(kg·°C)

B) 100 J/(kg·°C)

C) 1,000 J/(kg·°C)

D) 200 J/(kg·°C)

Which of the following is true about thermal energy?

A) Thermal energy increases as the mass of object decrease

B) Thermal energy is independent of the motion of particles

C) Thermal energy increases as the motion of particles increases

D) Thermal energy decreases as number of particles increase

Which of the following best defines thermal energy?

A) The amount of heat transferred from one object to another

B) The average kinetic energy of particles in an object

C) The total internal energy of an object due to the motion and arrangement of its particles

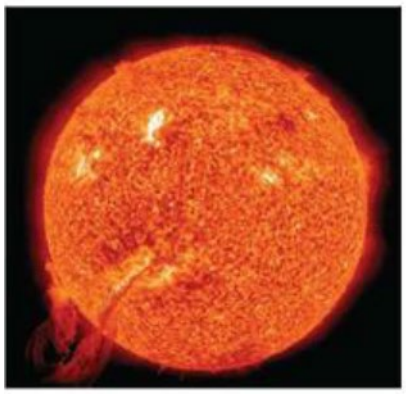
D) The difference in temperature between two objects

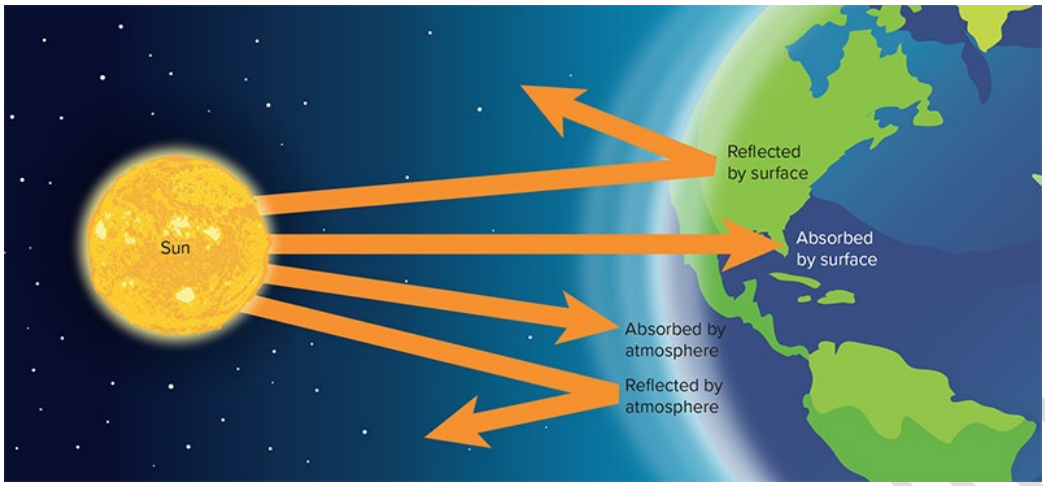
If two objects are at the same temperature, but one has more mass, which has more thermal energy?

a) The one with less mass
b) The one with more mass
c) Both have equal thermal energy
d) It depends on the material

What type of energy in a figure

A. Radiant energy
B. Electrical energy
C. Chemical energy
D. Elastic energy





Which type of energy transfer does NOT require a medium?

a) Conduction

b) Convection

c) Radiation

d) None of the above

Which process is responsible for heat transfer in fluids (liquids and gases)?

a) Conduction

b) Convection

c) Radiation

d) Condensation

What does the First Law of Thermodynamics state?

A) Energy cannot be created or destroyed, only transferred or converted from one form to another

B) Heat always flows from a cooler object to a warmer object

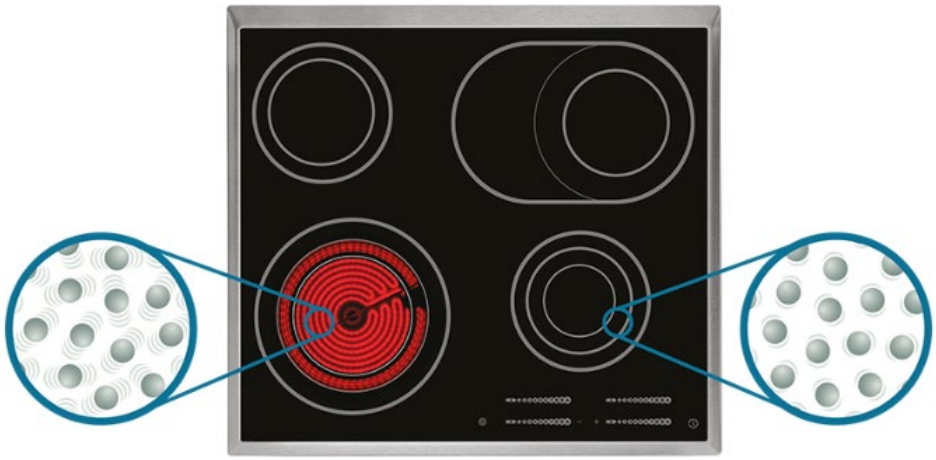
C) The total entropy of a system always decreases over time

D) Work done on a system does not affect its internal energy

Which type of energy is associated with the particles that make up a burner?

A. Thermal
B. Nuclear
C. Kinetic
D. Potential

Which of the following is True?



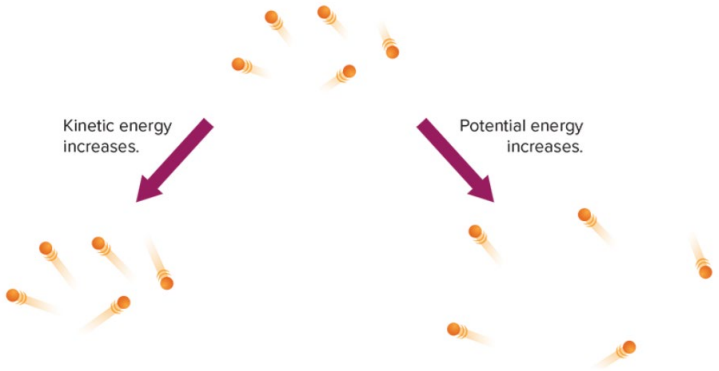
A. The particles that make up the left burner are moving faster than the particle right burner.

B. The particles that make up the right burner are moving faster than the particle left burner.

C. The same temperature the particles in left and right.

D. The same kinetic energy the particles in left and right.

Which of the following is true?



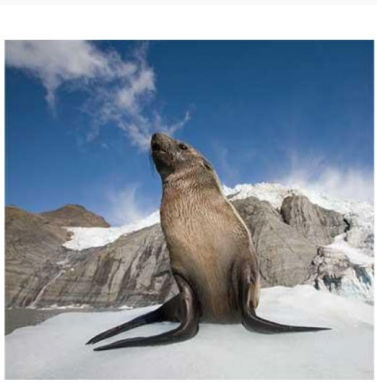
A. Kinetic energy increases, the particles move closer.

B. Potential energy decreases, the particles spread farther apart.

C. Kinetic energy increases, the particles move slower.

D. Kinetic energy increases, the particles move faster.

Which adaptation helps animals control heat loss in cold environments?




A. Scaly skin reflecting sunlight

B. Thick layer of fat reducing heat transfer

C. Thin skin allowing heat escape

D. Light fur that absorbs heat

Which of the following statements is TRUE ?

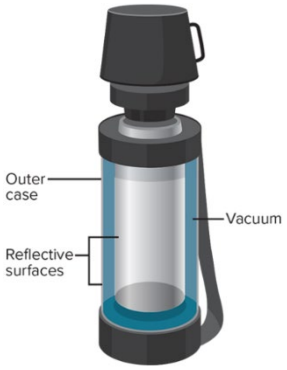
A) Metals are good thermal insulators

B) air pockets in clothing are good thermal insulator

C) Thin skin allowing heat escape

D) Insulators transfer thermal energy faster than conductors

How does the aluminum coating on a thermos help reduce energy transfer?



A. It absorbs heat to keep the liquid warm.

B. It makes the thermos heavier to retain heat.

C. It reflects radiation, preventing heat transfer in and out.

D. It conducts heat quickly to maintain temperature balance.

How does a nuclear power plant generate electricity?

A. By burning fossil fuels to produce steam

B. By using fission nuclear reaction

C. By capturing solar energy and converting it into electricity

D. By using fusion nuclear reaction

Which of the following is true about nuclear waste storage?

A. High-level waste is stored in spill-safe containers underground.

B. High-level waste is stored in steel-lined concrete pools filled with water.

C. low-level waste will not harm people and the environment.

D. All of the above.

Photovoltaic cells convert:

A. Chemical energy into thermal energy.

B. Mechanical energy into radiant energy.

C. Radiant energy into electrical energy.

D. Thermal energy into mechanical energy.

What is one solution to help fish migrate past dams?

A. Increasing the dam's height

B. Releasing more river sediments

C. Using fish ladders to help fish move upstream

D. Lowering the water temperature

Which of the following is true about wind turbines?

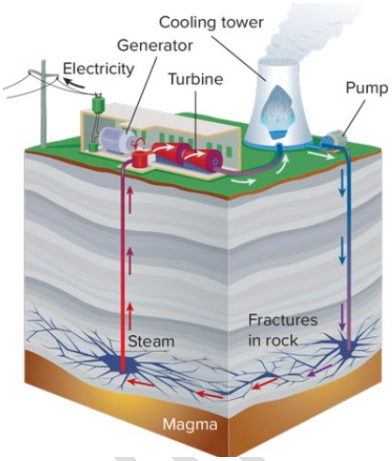
A. They convert wind energy into electrical energy.

B. They generate electricity regardless of wind speed.

C. They store energy without the need for batteries.

D. They consume non-renewable resources.

What is one disadvantage of geothermal power plants?



A. They cause severe air pollution.

B. They can only be built in volcanically active areas.

C. They consume large amounts of fossil fuels.

D. They require large amounts of sunlight.

How is geothermal energy converted into electrical energy?

A. Magma is burned to produce electricity.

B. The heat from the Sun is used to generate electricity.

C. Geothermal power plants use fossil fuels to create steam.

D. Hot rocks heat water into steam, which spins a turbine connected to a generator.

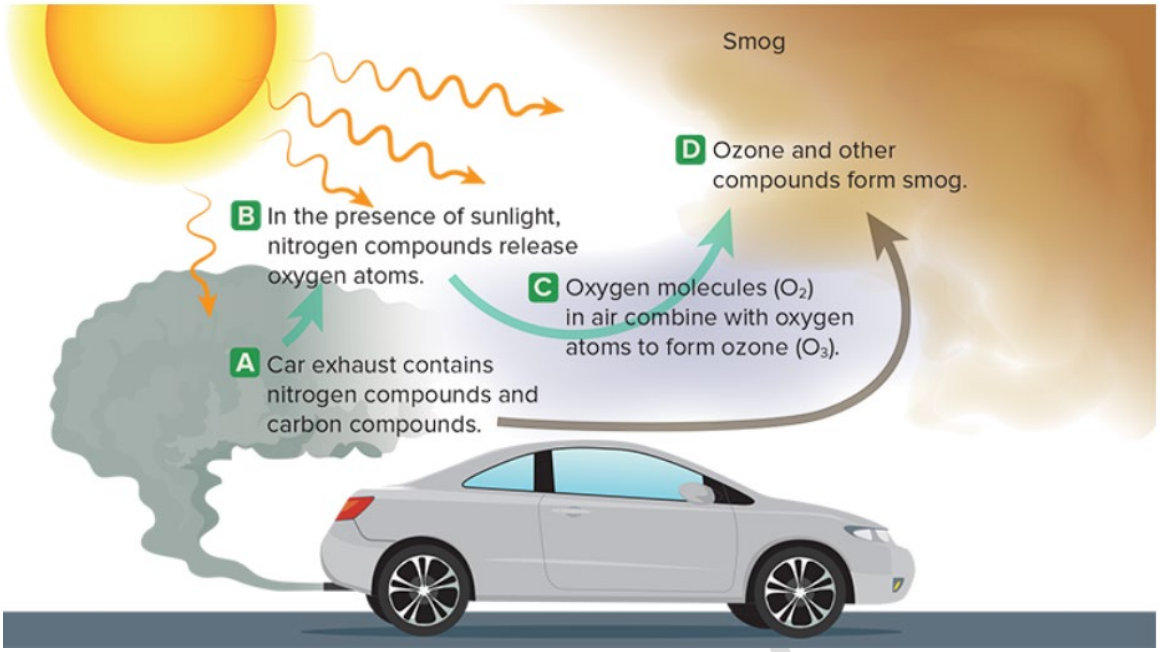
Which of the following is NOT an example of a renewable energy resource?

A. Solar energy

B. Wind energy

C. Coal

D. geothermal power



What causes photochemical smog to form?

A. The reaction between sunlight and pollutants from vehicles and factories

B. The mixing of water vapor and dust particles

C. The release of oxygen from plants

D. The absorption of carbon dioxide by the ocean

What is the main source of pollutants that cause photochemical smog?

A. Solar energy

B. Burning fossil fuels in cars, factories, and power plants

C. Wind blowing dust into the atmosphere

D. Natural volcanic eruptions

Why are fossil fuels considered to be non-renewable resources?

They are no longer being produced

They are being produced as fast as they are being used

They contain hydrocarbons

They are not being produced as fast as they are being used"

When a couch is pushed across the floor, what happens to its thermal energy?

A) It remains constant

B) It decreases due to cooling

C) It increases due to friction with the floor

D) It transfers energy to the surroundings without any effect on the couch

بالتوفيق والنجاح

أ/ أدهم زوين