



Grade 8

WORLD SCIENCE CHAMPIONSHIP 2024

Total Questions: 50

Total Marks: 50

Time: 1hr

Set: B

General Instructions for the Examinee

Opening Instructions:

Welcome to the world Maths Championship. Before we commence, please pay close attention to the following instructions:

- Electronic devices such as cell phones and MP3 players must be turned off.
- Do not share or exchange materials with other students.
- Unauthorized aids are strictly prohibited and its use can lead to disqualification.
- Calculators are not allowed for Grade 1-5
- Scientific Calculators are allowed for Grade 6-8
- Refrain from consulting notes, textbooks, teachers, or other students regarding the exam materials.

Instructions for Filling Student Details in OMR Sheet and Signing the Attendance sheet:

There will be a ten-minute break for students to fill in the details

Filling Student Details:

- Please refer to the instructions at the back of the OMR sheet for proper completion your details.

Signing Attendance sheet:

- Ensure you have signed the attendance sheet and OMR sheet provided.
- Invigilator should also sign your OMR sheet in the space provided.

marks - Total 35 marks.

- Grades 5 to 8: 50 questions of 1 mark each, there is no negative marking and if you skip/leave a question no marks will be given but also no marks will be deducted as -ve marks - Total 50 marks.

- Darken the circle corresponding to your chosen answer on the OMR sheet.
- Ensure you darken circles completely. Questions that do not have the darker circle are considered unanswered and will be counted wrong.
- You have 60 minutes to complete the exam.
- Note that you can choose only one answer – if you mark another response, that question will be disqualified.
- If you finish before the time is up, raise your hand, and the invigilator will collect your sheet for scoring. When you are finished and your OMR Sheet is collected, please leave the room quietly.

Instruction for Taking Examination:

- The question paper has been sealed by a reverse jacket. You have to cut on the right side to open the paper at the time of commencement of the examination. Check whether all the pages of the question paper are intact.
- This Examination is multiple-choice based, with either 4 options, 3 options or 2 options for each question.
- Each grade level has specific question formats and durations:
 - Grades 1 to 4: 35 questions of 1 mark each, there is no negative marking and if you skip/leave a question no marks will be given but also no marks will be deducted as -ve

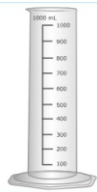
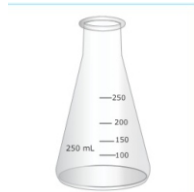
Thank you for your attention, and best of luck with the World Maths Championship!

Question: 1 of 50

QID: 1680

Marks : 1

Select the Erlenmeyer flask.

 A. B. C.**Question: 5 of 50**

QID: 1426

Marks : 1

This passage describes a chemical reaction. Read the passage. Then, follow the instructions below. Candles can be made from beeswax, the substance bees use to build honeycombs. As a beeswax candle's string, or wick, burns, the wax melts and rises up the string. The wax combines with oxygen in the air, forming carbon dioxide and water. This process releases energy in the form of light and heat. Complete the sentence. In this chemical reaction, water is a

 A. reactant B. product**Question: 6 of 50**

QID: 1436

Marks : 1

ladybug is walking straight across a flat leaf at a steady pace. Which statement describes the ladybug's motion?

 A. The ladybug has a constant velocity. B. The ladybug is accelerating**Question: 2 of 50**

QID: 1394

Marks : 1

The passage below describes an experiment. On winter mornings, Sadie had to scrape the ice off of the windshield and side mirrors of her car. Her friend told her that she should cover her side mirrors with plastic bags overnight to stop ice from forming. One winter night, Sadie secured a plastic bag over one of the side mirrors on her car. She left the other side mirror uncovered. In the morning, she checked the percentage of each mirror that was covered by ice. Sadie repeated this test every night for one week, alternating which mirror she covered each night. In this experiment, which were part of a control group?

 A. the uncovered side mirrors B. the covered side mirrors**Question: 7 of 50**

QID: 1446

Marks : 1

There are many types of energy. One type is kinetic energy, which is the energy an object has when it is moving. Read the passage about a bike ride. Think about the kinetic energy of the person riding the bike. Ellen was training for a bike race. One afternoon, she grabbed her helmet and took her bike out to the street. She got on the bike and started to pedal, pushing hard to start moving forward. Which of the following is better evidence that Ellen's kinetic energy changed?

 A. When Ellen started pedaling her bike, she began moving along the street. B. When Ellen got on her bike, her feet were no longer touching the ground.**Question: 3 of 50**

QID: 1688

Marks : 1

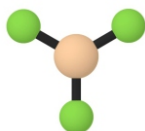
Orange juice in a glass has a volume of 425 cubic centimeters and a mass of 459 grams. Calculate its density. Write your answer to the hundredths place. _____ grams per cubic centimeter

 A. 1.08 B. 1 C. 1.01**Question: 4 of 50**

QID: 1406

Marks : 1

Select the chemical formula for this molecule.

 A. Bf3 B. BF C. Bf4 D. B2F2**Question: 8 of 50**

QID: 1480

Marks : 1

The images below show two pairs of magnets. The magnets in different pairs do not affect each other. All the magnets shown are made of the same material. Think about the magnetic force between the magnets in each pair. Which of the following statements is true?

 A. The magnitude of the magnetic force is greater in Pair 1. B. The magnitude of the magnetic force is greater in Pair 2. C. The magnitude of the magnetic force is the same in both pairs.

Question: 9 of 50

QID: 1481

Marks : 1

Two identical refrigerators in a restaurant kitchen lost power. The door of one fridge was slightly open, and the door of the other fridge was closed. This table shows how the temperature of each refrigerator changed over 10 minutes. During this time, thermal energy was transferred from to

Refrigerator	Initial temperature (°C)	Final temperature (°C)
Refrigerator with its door closed	4.0	5.5
Refrigerator with its door open	4.0	11.5

- A. the surroundings ... each refrigerator
- B. each refrigerator ... the surroundings

Question: 10 of 50

QID: 1669

Marks : 1

People often think of temperature as how hot or cold something is. But what exactly is temperature? Temperature is a measure of kinetic energy. Every substance is made up of particles. The temperature of a substance is related to the kinetic energies of these particles. If a substance is hot, its particles tend to have a large amount of kinetic energy. The particles in a substance have kinetic energy because they are moving. The particles are constantly in motion, even if the substance does not appear to be moving. Select all of the statements that are true about the rubber ball described above. The temperatures of the ball depends on the kinetic energies of the particles that make up the ball. If the ball is cold, its particles tend to have a small amount of kinetic energy The particles that make up the ball moving even when the ball is not.

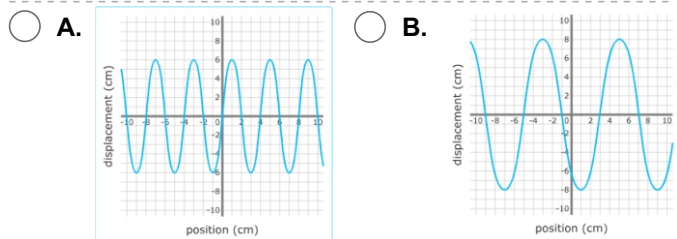
- A. 1, 2 and 3
- B. 1 and 3
- C. none of the above
- D. 2 and 3

Question: 11 of 50

QID: 1695

Marks : 1

The graphs below describe two waves. The waves are traveling at the same speed. Select the graph of the wave with the **greater amplitude**.

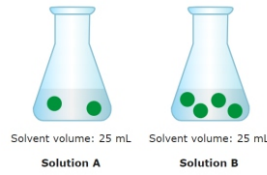


Question: 12 of 50

QID: 1699

Marks : 1

The diagram below is a model of two solutions. Each green ball represents one particle of solute. Which solution has a higher concentration of green particles?



- A. solution A
- B. solution B
- C. neither; their concentrations are the same
- D. B2F2

Question: 13 of 50

QID: 1704

Marks : 1

This species of tarantula was discovered near Folsom Prison in California. It was named after the musician Johnny Cash, who sang about the prison and was often called "The Man in Black." What is this tarantula's scientific name?



- A. *Aphonopelma johnnycashi*
- B. *Aphonopelma seemanni*

Question: 14 of 50

QID: 1706

Marks : 1

Life on Earth comes in many forms, from microscopic bacteria to giant redwood trees. Despite their differences, all living things are made up of the same types of molecules. Many of these molecules contain carbon and are called organic compounds. There are four main groups of organic compounds found in cells. One of these groups is carbohydrates. Which of the following are the primary functions of carbohydrates? Select the two best choices.

- to store the information needed for an organism's growth and development
- to form the rigid cell wall in a plant cell
- to supply energy for a cell's immediate use
- to control chemical reactions

- A. 2&3
- B. 1&4
- C. 2&4
- D. 1&3

Question: 15 of 50

QID: 1466

Marks : 1

Select the part whose main job is to break down sugar and release energy that the cell can use.

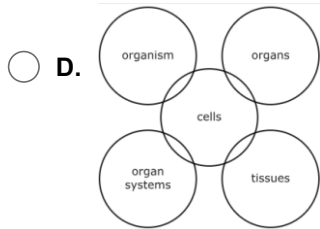
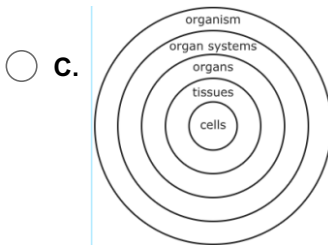
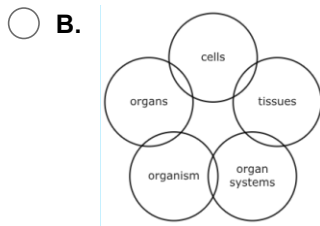
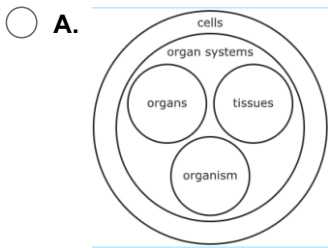
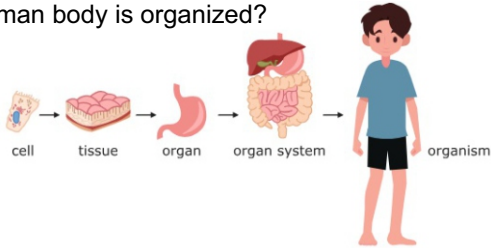
- A. mitochondria
- B. chromosomes
- C. Golgi
- D. nucleus

Question: 16 of 50

QID: 1716

Marks : 1

Humans are complex organisms. Complex organisms are made of smaller parts organized to work together to carry out the important functions of life. Cells form tissues, tissues form organs, organs form organ systems, and organ systems work together to keep the organism alive. This diagram shows the levels of organization in the human digestive system, which is one of eleven organ systems in the human body. Which model best represents how the human body is organized?

**Question: 19 of 50**

QID: 1711

Marks : 1

Which traits did *Megaloceros* have? Select the traits you can observe on the fossil.

1. our legs
2. antlers
3. a tail with long hair
4. a mane on the back of its neck



This picture shows a fossil of an ancient animal called *Megaloceros*. An adult *Megaloceros* could grow over seven feet tall.

 A. 1&4

 B. 2&4

 C. 1&3
Question: 20 of 50

QID: 2074

Marks : 1

Which traits did *Holophagus* have? Select the traits you can observe on the fossil.

1. long legs
2. two fins on its back
3. a large red lump on its head
4. a tail fin



This picture shows a fossil of an animal called *Holophagus*. *Holophagus* lived in the ocean and gave birth to live young.

 A. 1&4

 B. 2&4

 C. 1&3
Question: 17 of 50

QID: 1456

Marks : 1

Read the description of a trait. Sue knows how to fly a plane. What information supports the conclusion that Sue acquired this trait?

 A. Sue is in the Air Force. She flies a plane almost every day.

 B. A pilot taught Sue how to fly a plane.

 C. Sue can fly a plane on cloudy days and at night.
Question: 18 of 50

QID: 1457

Marks : 1

Read the description of a trait. Alec has hazel eyes. What information supports the conclusion that Alec inherited this trait?

 A. Alec's biological father wears contacts in his hazel eyes.

 B. Alec wears glasses and so do his sisters

 C. Alec's friend also has hazel eyes.

Question: 21 of 50

QID: 1726

Marks : 1

Animals often behave in certain ways that can increase their reproductive success. Read the passage about a specific animal behavior. Then, follow the instructions below. Long-tailed sun skinks are lizards that live in southeast Asia. Most female skinks abandon their nests after laying eggs. But female skinks that live on a particular island with many egg-eating snakes behave differently. These skinks may guard their nests for several days after laying eggs. When female skinks on the island guard their nests, fewer eggs are eaten by egg-eating snakes. If a female is at her nest when a snake approaches, she will attack the snake. Often, she can wrestle the snake out of her nest and away from her eggs. Why might guarding the nest increase the reproductive success of a female long-tailed sun skink? Complete the claim below that answers this question and is best supported by the passage. Guarding the nest increases the chances that _____



a long-tailed sun skink

- A. the female's eggs will hatch
- B. the female will lay more eggs
- C. the female will be injured by a snake

Question: 22 of 50

QID: 2014

Marks : 1

Animals often behave in certain ways that can increase their reproductive success. Read the passage about a specific animal behavior. Then, follow the instructions below. European earwigs are small insects that raise their offspring in cool, moist soil. After earwigs mate, females lay their eggs in underground nests. Females often groom, or clean, their eggs. The females lick their eggs and turn them over in the nest to groom them. When female earwigs groom eggs, the eggs hatch more often. This is because grooming helps to remove mold from the surface of the eggs. Mold often lives in the soil around the nest and can infect and kill the eggs. Why might grooming eggs increase the reproductive success of a female European earwig? Complete the claim below that answers this question and is best supported by the passage. Grooming eggs increases the chances that _____



a female European earwig caring for her eggs

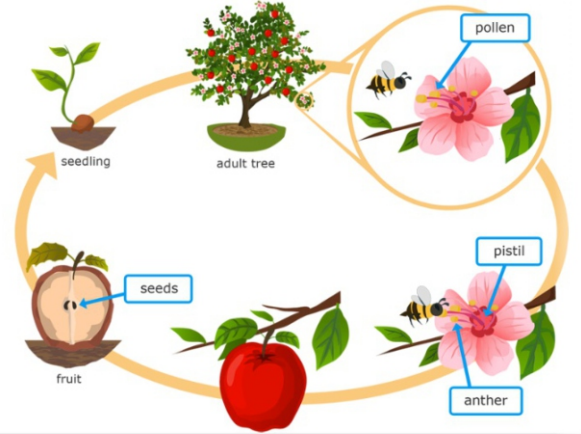
- A. the female's offspring will survive
- B. the female will spend time near her offspring
- C. the female will produce more eggs

Question: 23 of 50

QID: 1727

Marks : 1

This diagram shows the life cycle of an apple tree. Pollinators move pollen from one part of a flower to another. Where does a pollinator pick up pollen?



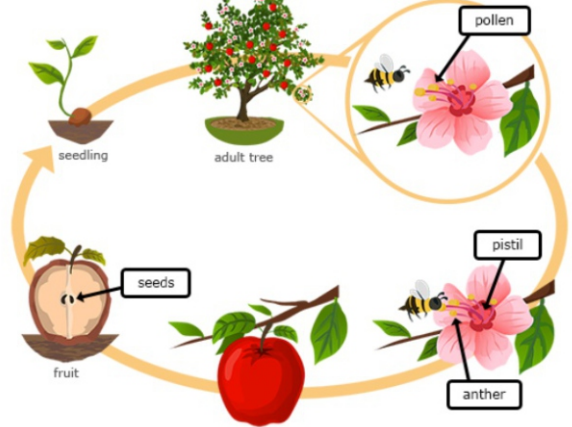
- A. the pistil
- B. the anthers

Question: 24 of 50

QID: 2096

Marks : 1

This diagram shows the life cycle of an apple tree. Which part of a flower can make eggs?



- A. the female part
- B. the male part

Question: 25 of 50

QID: 1729

Marks : 1

All organisms get chemical energy from food. Some organisms get food by eating other organisms. Others, including most plants, make their own food through a process called **photosynthesis**. Plant cells carry out photosynthesis to make food, which they use to get energy. Making this food does not *create* energy. Instead, photosynthesis *transforms* energy from the Sun into a form that can then be used to power cell growth. Complete the sentence to describe the energy transformation that happens during photosynthesis. When plant cells make food, they transform _____ into _____

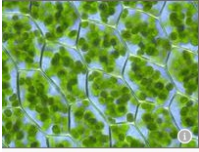
- A. chemical energy . . . light energy
- B. light energy . . . chemical energy

Question: 26 of 50

QID: 2029

Marks : 1

To perform photosynthesis, plant cells need to capture light energy from the Sun. Light energy is captured by molecules of a substance called chlorophyll. Chlorophyll is found inside the cells in round, green structures called chloroplasts. Photosynthesis takes place inside the chloroplasts. Complete the paragraph. Photosynthesis takes place inside a _____ called a chloroplast. Chloroplasts use chlorophyll to capture the _____ needed for photosynthesis.



plant cells with chloroplasts inside

- A. molecule, chemical energy
- B. cell structure, light energy

Question: 27 of 50

QID: 2032

Marks : 1

Plant cells can use the sugars from photosynthesis to get chemical energy. Cells get chemical energy from food through a series of chemical reactions called cellular respiration. These chemical reactions break down and rearrange food molecules to release chemical energy. Once chemical energy is released, a cell can use it directly for growth and other cell processes that plants need to live. Complete the sentences. By _____ sugar, _____ transforms light energy into chemical energy. By _____ sugar, _____ releases chemical energy from food.

- A. making, photosynthesis breaking down, cellular respiration
- B. making, cellular respiration breaking down, photosynthesis

Question: 28 of 50

QID: 1478

Marks : 1

Catoctin Mountain Park Catoctin Mountain Park is a temperate deciduous forest ecosystem in Maryland. Most of this forest was cut down for its wood in the early 1900s. But since the 1940s, conservation efforts have allowed the forest to return to much of this park. Which statements describe the Catoctin Mountain Park ecosystem? Select all that apply..



- A. It has soil that is poor in nutrients.
- B. It has a small amount of rain or snow.
- C. It has soil that is rich in nutrients.

Question: 29 of 50

QID: 1479

Marks : 1

Read the passage. Then answer the question. A cow grazing in a field often disturbs insects that are hiding in the grass. When the insects hop or fly away from the cow, they are more visible to predators such as cattle egrets. An egret can catch more insects when it forages, or looks for food, near the grazing cow than when it forages away from the cow. When the egret forages near the cow, the egret does not help or harm the cow's grazing. Which type of relationship is formed when a cattle egret forages near a cow?

- A. commensal
- B. mutualistic
- C. parasitic

Question: 30 of 50

QID: 1728

Marks : 1

Imagine a small island named Seafoam Island that is facing the following problem:

Seafoam Island is surrounded by a tropical coral reef called Seafoam Reef. Many tourists come to see Seafoam Reef, and Seafoam Island's residents earn money from these visitors. But as tourism has increased, more boats have started anchoring over the reef. The boats' anchors have hit and damaged corals. Seaweed often grows over damaged corals. Scientists on Seafoam Island have projected that if nothing is done to stop anchor damage, most of Seafoam Reef will eventually be covered with seaweed. If this happens, the reef will lose biodiversity, which means it will have fewer species. The residents of Seafoam Island will also lose important ecosystem services, such as money from tourism.



a scientist studying a reef covered in seaweed

The Seafoam Island Government Council has the job of finding a solution to the coral damage problem. However, finding the best solution is not easy. Seafoam Island has several major interest groups, or groups of people with important and distinct concerns about the problem. Each group has different requirements for a solution. One major interest group is concerned about the biodiversity of the reef. This group wants a solution that protects many different species. Another major interest group is concerned about jobs for Seafoam Island residents. This group wants a solution that keeps residents from losing money from tourism. The council wants to find a solution that will satisfy as many of the major interest groups on Seafoam Island as possible. What should the council do first?

- A. The council should find a solution that will protect as many species on Seafoam Reef as possible.
- B. The council should determine each major interest group's requirements for the solution.
- C. The council should figure out which solution will save Seafoam Island the most money.

Imagine a small island named Seafoam Island that is facing the following problem:

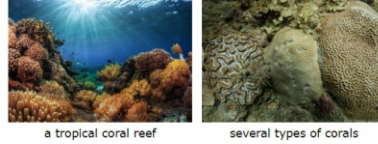
Seafoam Island is surrounded by a tropical coral reef called Seafoam Reef. Many tourists come to see Seafoam Reef, and Seafoam Island's residents earn money from these visitors. But as tourism has increased, more boats have started anchoring over the reef. The boats' anchors have hit and damaged corals. Scientists on Seafoam Island have projected that if nothing is done to stop anchor damage, most of the coral in Seafoam Reef will eventually be damaged or killed.



The Seafoam Island Government Council has the job of finding a solution to the coral damage problem. However, finding the best solution is not easy. Seafoam Island has several major **interest groups**, or groups of people with important and distinct concerns about the problem. Each group has different requirements for a solution. One major interest group is concerned about the reef's **biodiversity**, or the number of species that live on the reef. This group wants a solution that protects many different species. Another major interest group is concerned about the **ecosystem services** the reef provides, including jobs for Seafoam Island residents. This group wants a solution that keeps residents from losing money from tourism. The council wants to find a solution that will satisfy as many of the major interest groups on Seafoam Island as possible. What should the council do first?

- A. The council should find a solution that will protect as many species on Seafoam Reef as possible
- B. The council should determine each major interest group's requirements for the solution.
- C. The council should figure out which solution will save Seafoam Island the most money.

Atropical coral reef is a type of ecosystem in the ocean. Tropical coral reefs are found in warm, shallow water near the equator. They have many large formations called corals. Corals may look like rocks or plants, but they are actually structures made up of living animals and can grow over time. Corals provide shelter for fish, crabs, eels, and many other organisms. These coral reef organisms are prey for larger animals, such as sea turtles, sharks, and dolphins. Most of these organisms need tropical coral reefs in order to survive and reproduce.

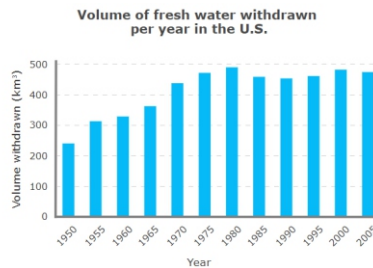


Which of the following are characteristics of tropical coral reefs? Select all that apply.

- 1. They are used by many different organisms.
- 2. They have many large rocks called corals.
- 3. They are usually found in the deep ocean.
- 4. They have warm, salty water.

- A. 1&2
- B. 1&4
- C. 2&3

Fresh water is a natural resource that humans use every day. Fresh water has many uses, including drinking, cleaning, taking care of livestock, irrigating farms, and generating electricity. Since 1950, the United States Geological Survey (USGS) has tracked the volume of fresh water used in the United States. The graph below shows the volume of fresh water withdrawn, or taken by humans for any use, in a given year. The data were collected every five years, starting in 1950 and ending in 2005. Select the statement that is supported by the data.



- A. The volume of fresh water withdrawn per year increased every five years between 1950 and 2005.
- B. The volume of fresh water withdrawn per year increased steadily until 1980.

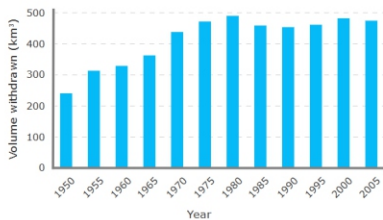
Question: 34 of 50

QID: 2115

Marks : 1

Fresh water is a natural resource that humans use every day. Fresh water has many uses, including drinking, cleaning, taking care of livestock, irrigating farms, and generating electricity. Since 1950, the United States Geological Survey (USGS) has tracked the volume of fresh water used in the United States. The graph below shows the volume of fresh water withdrawn, or taken by humans for any use, in a given year. The data were collected every five years, starting in 1950 and ending in 2005. Select the statement that is supported by the data.

Volume of fresh water withdrawn per year in the U.S.



- A. The volume of fresh water withdrawn per year increased every five years between 1950 and 2005.
- B. The volume of fresh water withdrawn per year increased steadily until 1980.

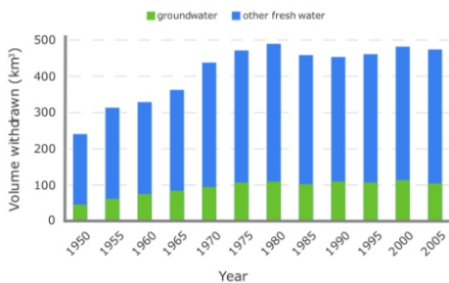
Question: 35 of 50

QID: 2116

Marks : 1

The graph below shows the volume of groundwater and all other fresh water withdrawn between 1950 and 2005 in the United States. Since 1950, _____ of the fresh water withdrawn in the U.S. was groundwater

Volume of fresh water withdrawn per year in the U.S.



- A. over half
- B. about one-fifth

Question: 36 of 50

QID: 1476

Marks : 1

Granodiorite has the following properties: not made by living things coarse-grained texture, naturally occurring no fixed crystal structure solid, not a pure substance Is granodiorite a mineral or a rock?



- A. mineral
- B. rock

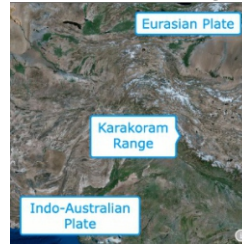
Question: 37 of 50

QID: 1737

Marks : 1

Read the passage and look at the picture. The Karakoram Range is a mountain range that extends into Afghanistan, China, India, Pakistan, and Tajikistan. This range has many tall mountains, including K2, the second-tallest peak on Earth. K2 rises 8,611 meters above sea level. The Karakoram Range formed as the Indo-Australian Plate moved toward and collided with the Eurasian Plate.

Complete the sentence.
The Karakoram Range formed at a _____ boundary.



- A. convergent
- B. divergent
- C. transform

Question: 38 of 50

QID: 2088

Marks : 1

Read the passage and look at the picture. The Motagua Fault cuts across Guatemala, marking the boundary between the North American Plate and the Caribbean Plate. The two plates slide past each other along this fault, moving at a rate of about 20 millimeters per year. In February of 1976, the plates along the Motagua Fault moved suddenly, causing a magnitude 7.5 earthquake. The earthquake made a visible crack in the ground that was over 160 kilometers long! Complete the sentence. The Motagua Fault formed at a _____ boundary.



- A. convergent
- B. divergent
- C. transform

Question: 39 of 50

QID: 2089

Marks : 1

Read the passage and look at the picture. The Aden Ridge began to form millions of years ago as the Somalian Plate and the Arabian Plate moved away from each other. The plates are slowly moving apart at a rate of about 2 centimeters per year. On the map, the ridge is shown in the Gulf of Aden, between the countries of Somalia and Yemen. Complete the sentence.

The Aden Ridge formed at a _____ boundary.



- A. convergent
- B. divergent
- C. transform

Carbon is a chemical element. It is the sixth element listed in the periodic table of elements.

Periodic Table of the Elements

1 H Hydrogen																	2 He Helium
3 Li Lithium	4 Be Beryllium											5 B Boron	6 C Carbon	7 N Nitrogen	8 O Oxygen	9 F Fluorine	10 Ne Neon
11 Na Sodium	12 Mg Magnesium											13 Al Aluminum	14 Si Silicon	15 P Phosphorus	16 S Sulfur	17 Cl Chlorine	18 Ar Argon
19 K Potassium	20 Ca Calcium	21 Sc Scandium	22 Ti Titanium	23 V Vanadium	24 Cr Chromium	25 Mn Manganese	26 Fe Iron	27 Co Cobalt	28 Ni Nickel	29 Cu Copper	30 Zn Zinc	31 Ga Gallium	32 Ge Germanium	33 As Arsenic	34 Se Selenium	35 Br Bromine	36 Kr Krypton
37 Rb Rubidium	38 Sr Strontium	39 Y Yttrium	40 Zr Zirconium	41 Nb Niobium	42 Mo Molybdenum	43 Tc Technetium	44 Ru Ruthenium	45 Rh Rhodium	46 Pd Palladium	47 Ag Silver	48 Cd Cadmium	49 In Indium	50 Sn Tin	51 Sb Antimony	52 Te Tellurium	53 I Iodine	54 Xe Xenon
55 Cs Cesium	56 Ba Barium	57 La Lanthanum	58 Ce Cerium	59 Pr Praseodymium	60 Nd Neodymium	61 Pm Promethium	62 Sm Samarium	63 Eu Europium	64 Gd Gadolinium	65 Tb Terbium	66 Dy Dysprosium	67 Ho Holmium	68 Er Erbium	69 Tm Thulium	70 Yb Ytterbium	71 Lu Lutetium	
87 Fr Francium	88 Ra Radium	89 Ac Actinium	90 Th Thorium	91 Pa Protactinium	92 U Uranium	93 Np Neptunium	94 Pu Plutonium	95 Am Americium	96 Cm Curium	97 Bk Berkelium	98 Cf Californium	99 Es Einsteinium	100 Fm Fermium	101 Md Mendelevium	102 No Nobelium	103 Lr Lawrencium	

Carbon is essential for all living things on Earth. In fact, all of the cells in every living thing contain some carbon! Carbon can also be found in some nonliving things. The movement of carbon between living things, the atmosphere, the oceans, and Earth's crust is known as the carbon cycle. Which of the following statements are true? Select all that apply.

1. Some non-living things contain carbon.
2. Carbon moves between the non-living and living parts on earth.
3. All the living things contain carbon.
4. The chemical symbol for carbon is C.

- A. 1 and 2 B. 1,3 And 4
- C. all of the above

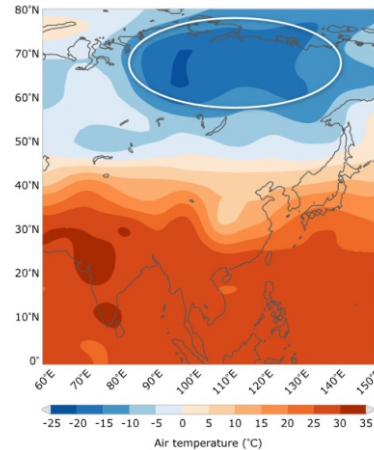
How does a tree branch provide energy for the deer?



Living things use carbon-based molecules for energy. For example, when this deer eats a tree branch, it consumes glucose, cellulose, and other carbon-based molecules. These molecules are broken down and rearranged in the deer's cells, releasing energy.

- A. The deer's cells break down molecules in the plant to form new molecules and release energy.
- B. Carbon-based molecules move from the deer to the plant, releasing energy.
- C. Glucose and cellulose are made in the deer's cells, releasing energy.

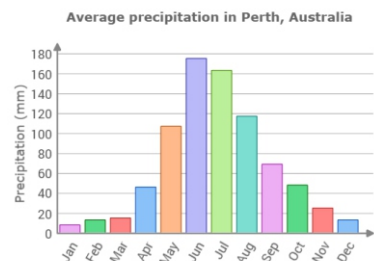
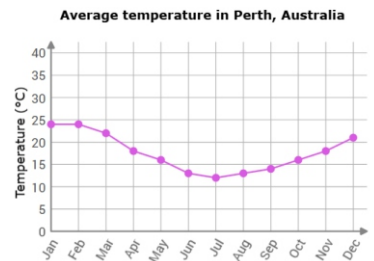
The map below shows air temperatures in the lower atmosphere on October 28, 2016. The outlined area shows an air mass that influenced weather in Asia on that day. Look at the map. Then, answer the question below.



Data source: United States National Oceanic and Atmospheric Administration/Earth System Research Laboratory, Physical Sciences Division Which air temperature was measured within the outlined area shown?

- A. -22°C B. -4°C
- C. 2°C

Perth is a city in Australia. It is located in the Southern Hemisphere. It has a mediterranean climate Which statement best describes the climate of Perth? Hint: Summers in the Southern Hemisphere occur in December, January, and February. Winters in the Southern Hemisphere occur in June, July, and August..



- A. Summers have higher temperatures and ore precipitation than winters.
- B. Summers have less precipitations and higher temperatures than winters on average.
- C. Summers and winters have about the same amount of precipitation, but summers are hotter.

Question: 44 of 50

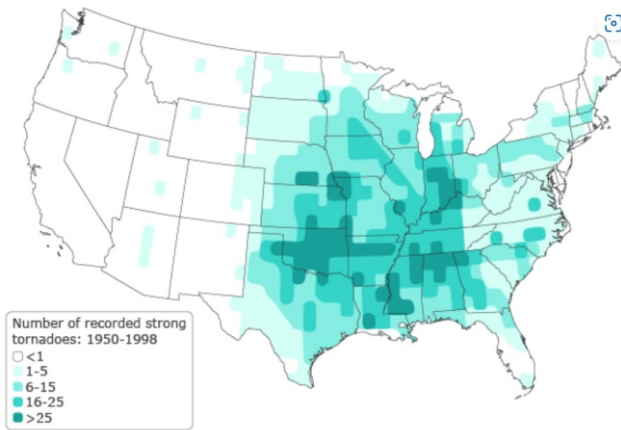
QID: 1661

Marks : 1

A natural hazard is an event that occurs naturally and can harm people or the environment. There are many types of natural hazards. To help people plan for the damage natural hazards can cause, scientists make maps to show where and how often these events happen. For example, the map below shows data about tornadoes in the United States. Tornadoes are large columns of rotating air that can form during thunderstorms. Strong tornadoes have high wind speeds and can cause severe damage.

Complete the statement.

This map does not show _____ of strong tornadoes in each region of the United States between 1950 and 1998. Instead, it shows _____ of strong tornadoes in each region.



Source: Federal Emergency Management Agency

- A. the exact number , a range for the number
- B. the exact number , the exact number
- C. a range for the number , the exact number
- D. a range for the number , a range for the number

Question: 45 of 50

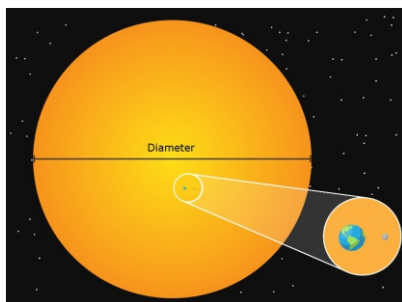
QID: 1660

Marks : 1

Our solar system is made up of the Sun and all the objects that move around it. These objects include planets, moons, asteroids, and comets. The sizes of the objects in the solar system are difficult to imagine without the help of a model.

Models make certain characteristics of a system easier to understand. A model can be a physical object, a graph, a diagram, or a simulation. The diagram below is a model that shows the relative sizes of the Sun, the Moon, and Earth. The two small dots represent the accurate sizes of Earth and the Moon compared to the Sun. A close-up view of Earth and the Moon is also shown.

The Sun's diameter is about ___ times greater than Earth's.



- A. 4 feet
- B. 4 inches
- C. 4 miles
- D. 4 yards

Question: 46 of 50

QID: 1418

Marks : 1

How long is a seesaw? Select the best estimate.

- A. 4 feet
- B. 4 inches
- C. 4 miles
- D. 4 yards

Question: 47 of 50

QID: 1419

Marks : 1

How long is a paintbrush? Select the best estimate.

- A. 11 inches
- B. 11 yards
- C. 11 miles
- D. 11 feet

Question: 48 of 50

QID: 1420

Marks : 1

What is the temperature of a pot of boiling water? Select the better estimate.

- A. 100°F
- B. 100°C

Question: 49 of 50

QID: 1416

Marks : 1

How long is a kitchen table? Select the best estimate.

- A. 8 feet
- B. 8 yards
- C. 8 inches
- D. 8 miles

Question: 50 of 50

QID: 1417

Marks : 1

How long is the Panama Canal? Select the best estimate.

- A. 50 miles
- B. 50 inches
- C. 50 yards
- D. 50 feet

--- END OF QUESTION PAPER ---