THE UNIVERSITY OF THE STATE OF NEW YORK

GRADE 8

INTERMEDIATE-LEVEL SCIENCE TEST

WRITTEN TEST

JUNE 3, 2019

Student Name _____

School Name _____

The possession or use of any communications device is strictly prohibited when taking this examination. If you have or use any communications device, no matter how briefly, your examination will be invalidated and no score will be calculated for you.

Print your name and the name of your school on the lines above.

The questions on this test measure your knowledge and understanding of science. The test has two parts. Both parts are contained in this test booklet.

Part I consists of 45 multiple-choice questions. Record your answers to these questions on the separate answer sheet. Use only a No. 2 pencil on your answer sheet.

Part II consists of 40 open-ended questions. Write your answers to these questions in the spaces provided in this test booklet.

You may use a calculator to answer the questions on the test if needed.

You will have two hours to answer the questions on this test.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO.

Part I

DIRECTIONS

There are 45 questions on Part I of the test. Each question is followed by four choices, numbered 1 through 4. Read each question carefully. Decide which choice is the best answer. On the separate answer sheet, mark your answer in the row of circles for each question by filling in the circle that has the same number as the answer you have chosen.

Read the sample question below.

Sample Question

Earth gets most of its light from

(1) the stars
(2) the Sun
(3) the Moon
(4) other planets

The correct answer is **the Sun**, which is choice number **2**. On your answer sheet, look at the box showing the row of answer circles for the sample question. Since choice number **2** is the correct answer for the sample question, the circle with the number **2** has been filled in.

Answer all of the questions in Part I in the same way. Mark only one answer for each question. If you want to change an answer, be sure to erase your first mark completely. Then mark the answer you want.

You will not need scrap paper. You may use the pages of this test booklet to work out your answers to the questions.

You may use a calculator if needed.

When you are told to start working, turn the page and begin with question 1. Work carefully and answer all of the questions in Part I.

When you have finished Part I, go right on to Part II. Answer all of the questions in Part II.

Part I

1 Which cell structure do nutrients pass through to enter a cell?

(1) cell membrane
(2) chloroplast
(3) cytoplasm
(4) nucleus

2 A group of tissues that work together to perform a specific function is called

(1) an organ
(2) an organism
(3) a system
(4) a cell

3 When food is being mechanically digested, it is being

(1) changed into another substance
(2) made smaller in size
(3) converted into energy
(4) excreted from the body

4 The primary purpose of which human organ system is to produce hormones that regulate body functions?

(1) skeletal
(2) muscular
(3) circulatory
(4) endocrine

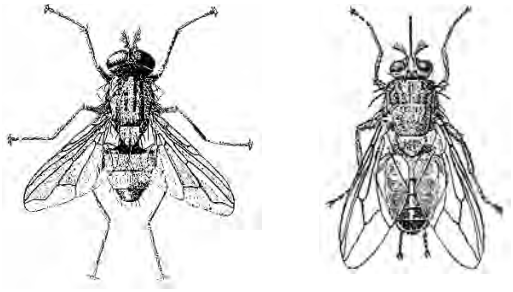
5 Which gas is used by humans in the process of cellular respiration?

(1) methane
(2) nitrogen
(3) oxygen
(4) carbon dioxide

6 Which process occurs during the growth and development of a fertilized human egg?

(1) cell division
(2) natural selection
(3) germination
(4) evolution

7 The diagram below represents two flies. They look similar but they can *not* sexually reproduce with each other and produce offspring.



This means that the two flies most likely belong to

(1) the same kingdom and same species
(2) the same kingdom, but different species
(3) different kingdoms, but same species
(4) different kingdoms and different species

8 Abnormal cell division results in

(1) cancer
(2) homeostasis
(3) metabolism
(4) microbes

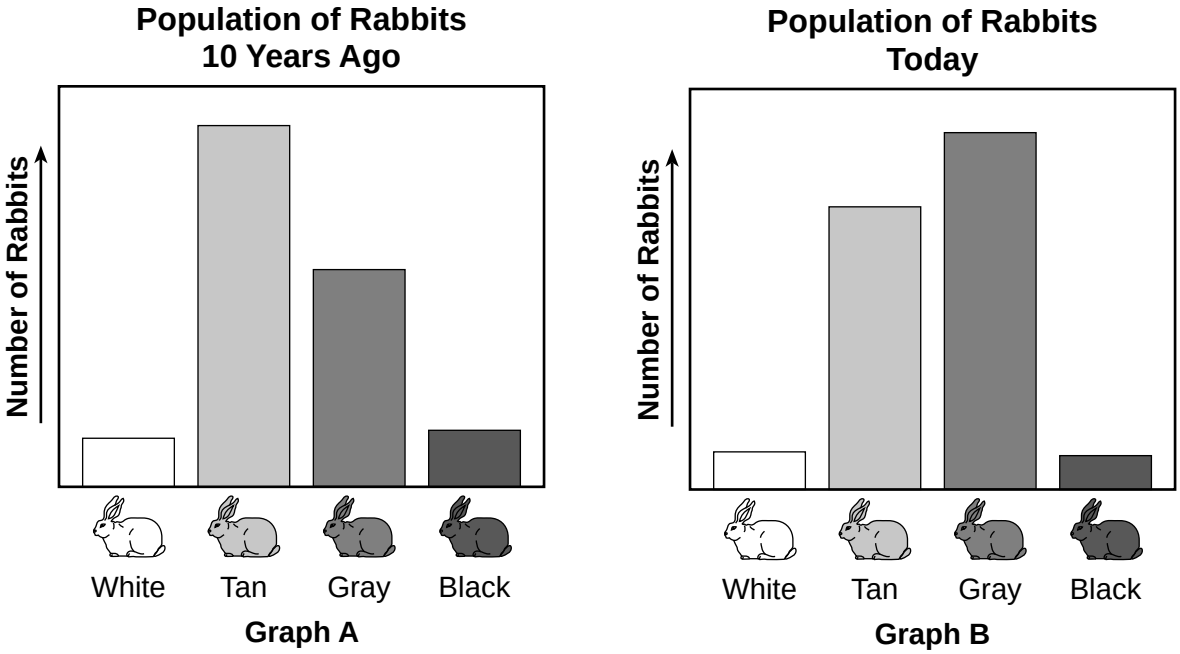
9 The carbohydrates, proteins, and minerals that are vital to an organism's survival are found in

(1) oxygen
(2) carbon dioxide
(3) food
(4) water

10 During the process of photosynthesis, green plants produce

(1) sunlight
(2) methane
(3) nitrogen
(4) sugar

Base your answers to questions 11 and 12 on the graphs below and on your knowledge of science. The graphs show the populations of rabbits with four different fur colors in one area. Graph *A* represents the population of rabbits 10 years ago. Graph *B* represents the population of rabbits today.



11 At the end of the 10-year period, which color of rabbit appears to be best adapted to its environment?

(1) white
(2) tan
(3) gray
(4) black

12 Variations in traits, such as the fur color of rabbits, may be caused by

(1) sexual reproduction
(2) a decrease in air pollution
(3) dynamic equilibrium
(4) adequate resources

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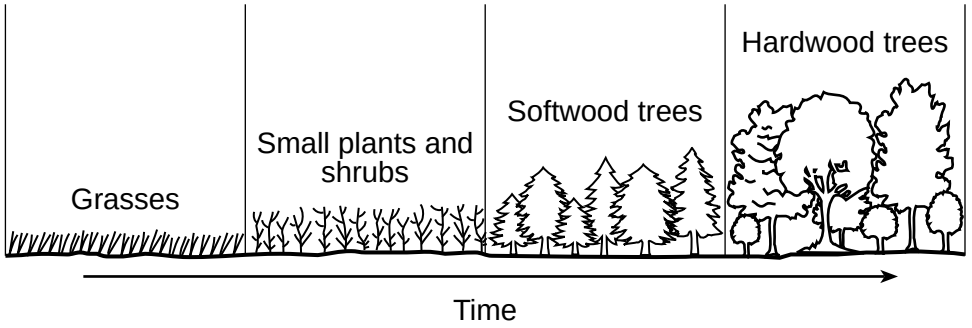
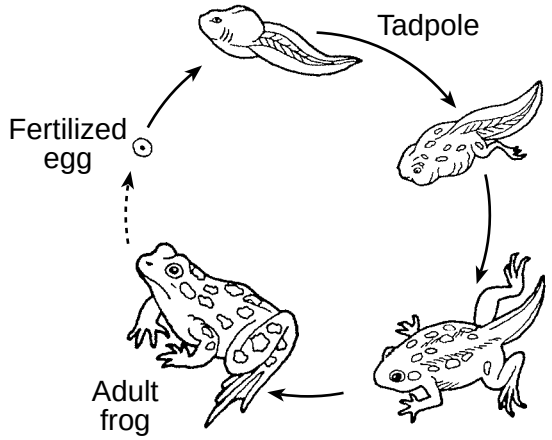
13 The diagram below represents changes in the types of plants growing in the same area during four different time periods. Different types of plants have been labeled for each time period.



This change in plant types over time is an example of

(1) ecological succession
(2) urban growth
(3) selective breeding
(4) genetic engineering

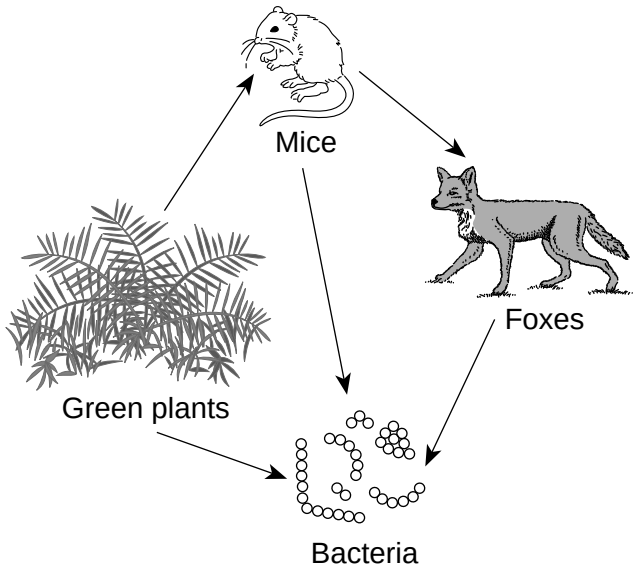
14 The diagram below represents the life cycle of a frog.



This diagram shows that, in frogs,

(1) methods of sexual reproduction depend on the species
(2) metabolism is the sum of all chemical reactions
(3) body structures change during development
(4) offspring always look like the adult

15 The diagram below represents a partial food web.



Which organisms in this food web decompose materials and recycle wastes?

(1) green plants
(2) mice
(3) bacteria
(4) foxes

16 All of the plants and animals living in the same area make up a

(1) population
(2) community
(3) species
(4) habitat

17 Which change would most likely cause a decrease in the number of squirrels living in an area?

(1) a decrease in the number of predators
(2) a decrease in competition between the squirrels
(3) an increase in available food
(4) an increase in the number of forest fires

18 The passage below describes how a catalytic converter in a car works.

How a Catalytic Converter Works

Gases produced by a car's engine flow through the catalytic converter, which contains metals. These metals start a chemical reaction that makes the gases released by the car less harmful to the environment.

The catalytic converter most likely was developed in response to

(1) the demand for more energy-efficient cars
(2) the demand for increased car engine power
(3) a need for lower-priced cars
(4) a need to reduce air pollution

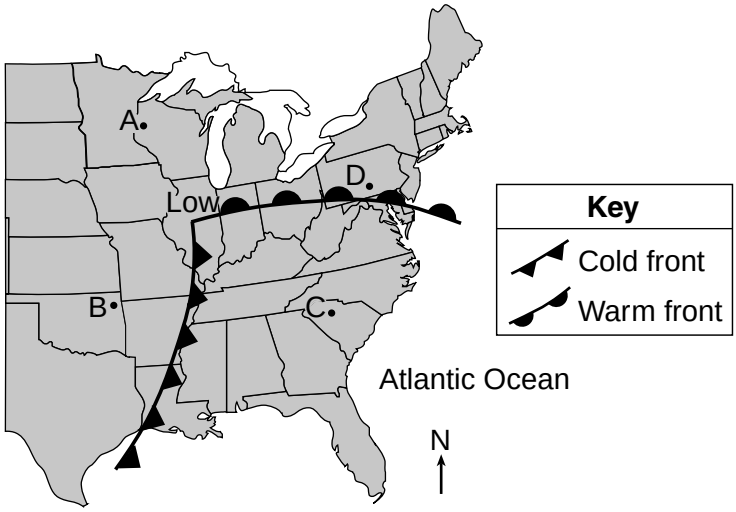
19 The formation of rock fragments and soil is most likely the result of

(1) weathering
(2) gravity
(3) convection cells
(4) hazardous weather

20 All matter is made up of

(1) cells
(2) atoms
(3) molecules
(4) compounds

21 The weather map below shows a low-pressure system over the eastern United States. Points *A*, *B*, *C*, and *D* represent locations on Earth's surface.



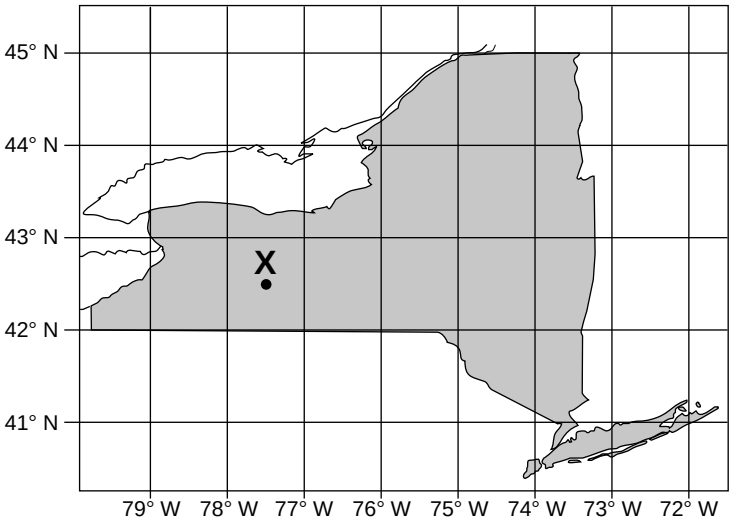
Which location is most likely experiencing rainy, unstable weather conditions?

(1) *A*
(2) *B*
(3) *C*
(4) *D*

22 In New York State there is a greater chance of precipitation falling as snow in January than in March, because in January the Northern Hemisphere is tilted

(1) toward the Sun, and temperatures are warmer
(2) toward the Sun, and temperatures are colder
(3) away from the Sun, and temperatures are warmer
(4) away from the Sun, and temperatures are colder

23 Point *X* on the map below represents a location in New York State.



What is the approximate latitude and longitude of location *X*?

(1) 42.5° N, 77.5° E
(2) 42.5° N, 77.5° W
(3) 42.5° S, 77.5° E
(4) 42.5° S, 77.5° W

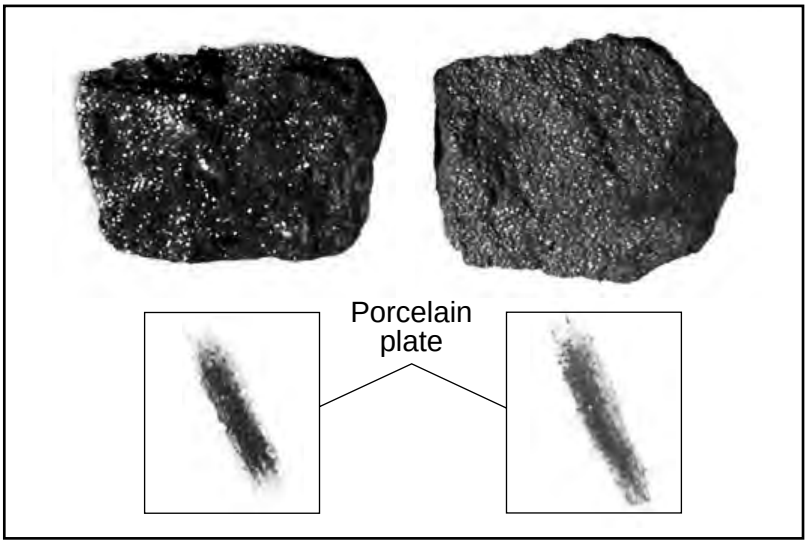
24 The photograph below shows a large, deep channel that formed as a result of running water that removed the soil.

Source: *Modern Earth Science,* Ramsey & Burckley. Holt Rinehart, Winston (1965). (Adapted)

Which process was responsible for the removal of the soil?

(1) deposition
(2) erosion
(3) faulting
(4) tilting

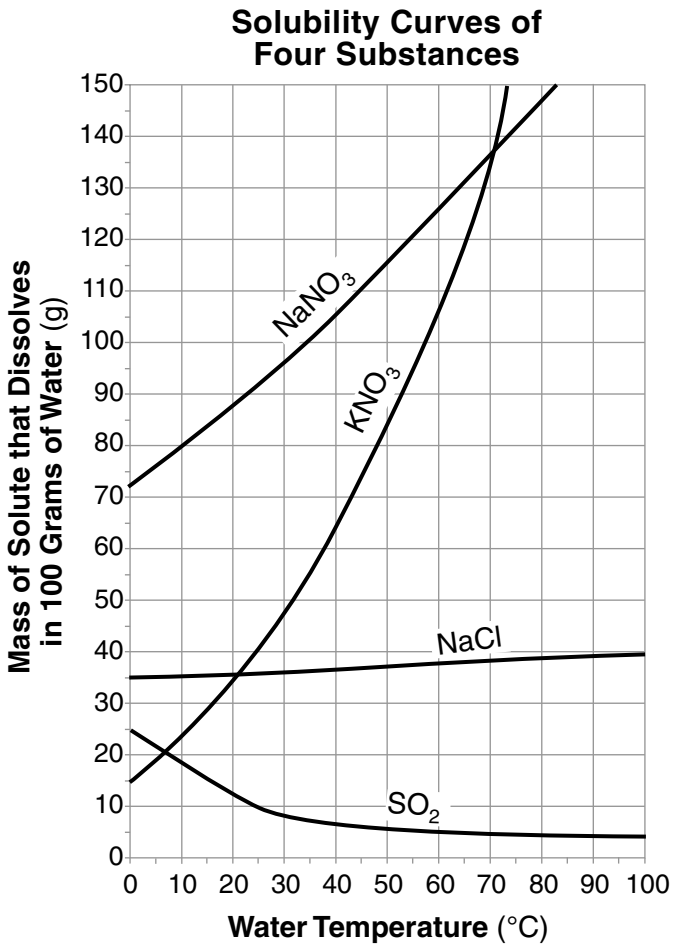
25 The photograph below shows a test for a mineral property.



Which mineral property is being tested?

(1) density
(2) texture
(3) streak
(4) reaction to acid

26 The graph below shows how water temperature affects the solubility of four different substances.



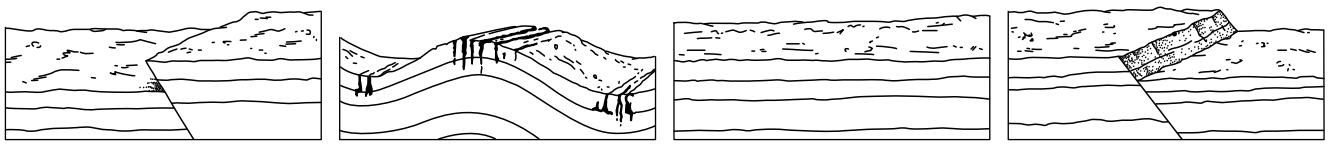
The solubility of which substance is *least* affected by the temperature of the water?

(1) $NaNO_3$
(2) KNO_3
(3) NaCl
(4) SO_2

27 The movement of the liquid in a thermometer shows changes in temperature. An increase in temperature indicates the molecules in the liquid

(1) moved slower and closer together
(2) moved faster and spread farther apart
(3) contracted in size when heated
(4) expanded in size when heated

28 Which diagram represents folded rock layers?



(1) (2) (3) (4)

29 A portion of the Periodic Table of the Elements is shown below. The table provides a separate box for each chemical element, with all the elements in one vertical column having similar properties.

Portion of the Periodic Table of the Elements

KEY

28 — approximate atomic mass
Si — symbol
Silicon — name
14 — atomic number

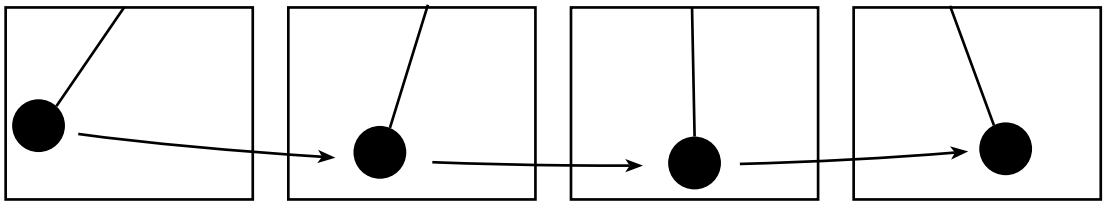
Groups

11	12	13	14	15	16	17	18
							4 He Helium 2
		11 B Boron 5	12 C Carbon 6	14 N Nitrogen 7	16 O Oxygen 8	19 F Fluorine 9	20 Ne Neon 10
		27 Al Aluminum 13	28 Si Silicon 14	31 P Phosphorus 15	32 S Sulfur 16	35 Cl Chlorine 17	40 Ar Argon 18
64 Cu Copper 29	65 Zn Zinc 30	70 Ga Gallium 31	73 Ge Germanium 32	75 As Arsenic 33	79 Se Selenium 34	80 Br Bromine 35	84 Kr Krypton 36
108 Ag Silver 47	112 Cd Cadmium 48	115 In Indium 49	119 Sn Tin 50	122 Sb Antimony 51	128 Te Tellurium 52	127 I Iodine 53	131 Xe Xenon 54

Which element is a noble gas?

(1) Ag
(2) Ge
(3) Cl
(4) Kr

30 The diagram below represents the same pendulum in four different positions.



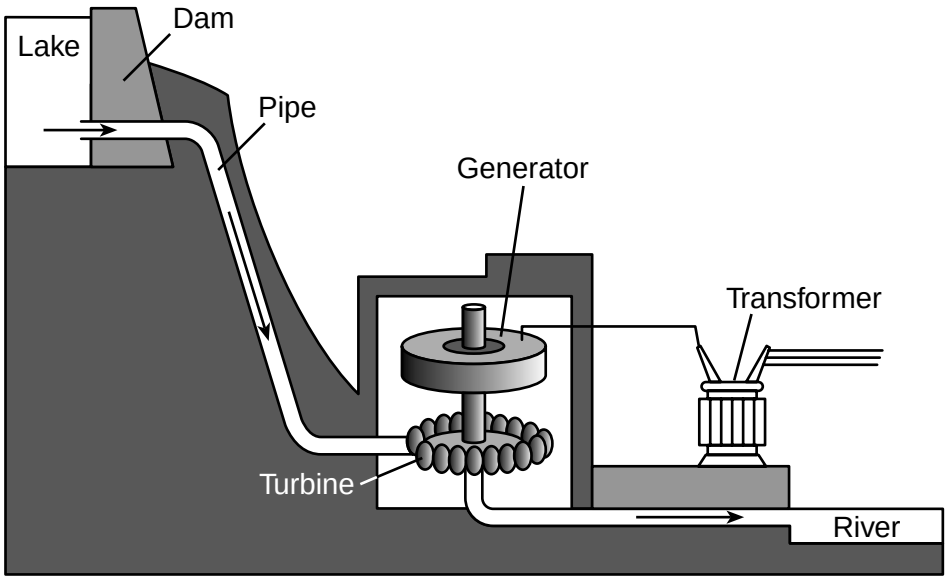
At which position does the ball have the most potential energy?

(1) 1
(2) 2
(3) 3
(4) 4

31 One characteristic that salt water and sugar-water have in common is, at room temperature, they are

(1) gases
(2) solids
(3) mixtures
(4) elements

32 The diagram below represents parts of a power facility that are used to produce electricity.

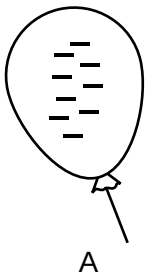


(Not drawn to scale)

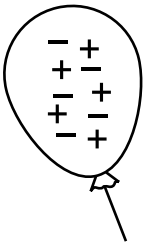
What is the major source of energy for the production of electricity in this facility?

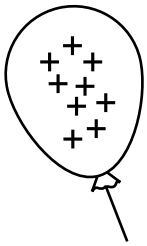
(1) nuclear power
(2) prevailing winds
(3) moving water
(4) burning coal

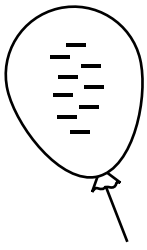
33 The illustration below represents balloon *A*, which has an electrical charge.

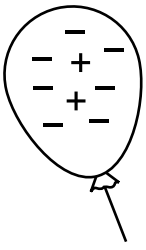


Balloon *A* would be most attracted to which balloon?

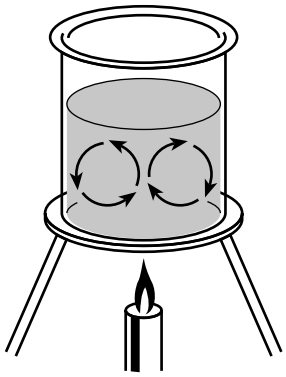








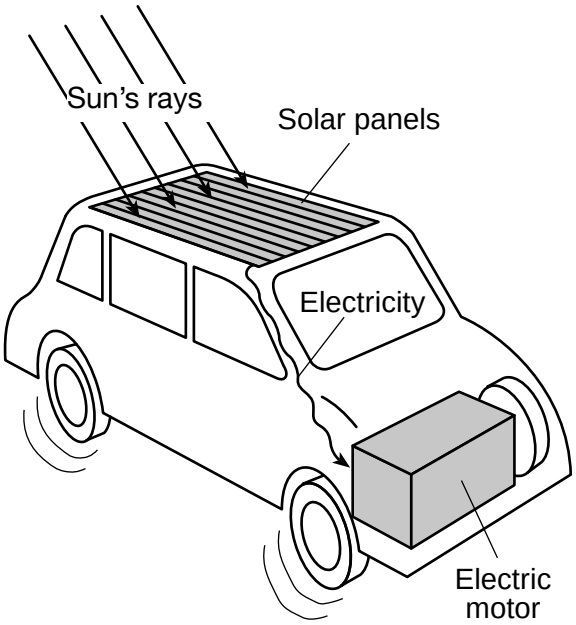
34 The diagram below represents a beaker of water being heated by a flame. The arrows represent heat transfer occurring in the beaker.



Which process is represented by the arrows in the diagram?

(1) condensation
(2) conduction
(3) convection
(4) radiation

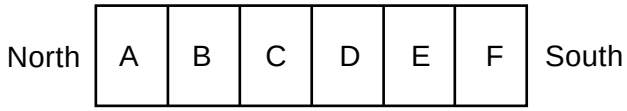
35 The diagram below represents energy transformations in a moving electric toy car.



Which form of energy is the original source of power for this car?

(1) electrical
(2) mechanical
(3) sound
(4) light

36 The diagram below represents a bar magnet. Six locations, *A* through *F*, are labeled on the magnet.



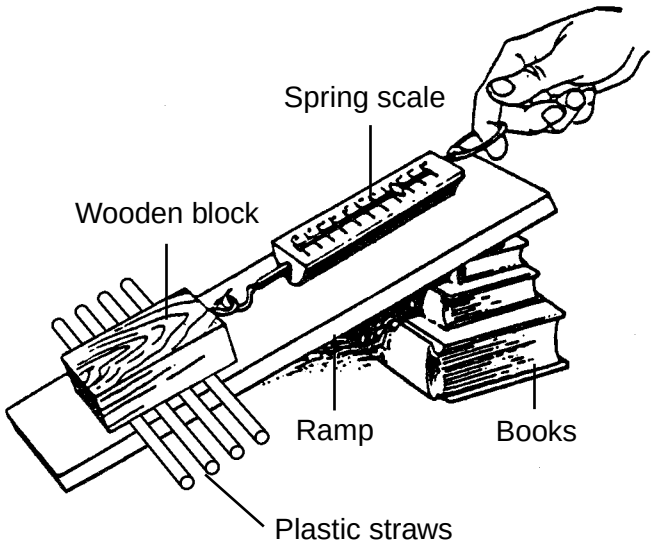
Which *two* locations on the magnet would have the greatest attractive forces?

(1) *A* and *F*
(2) *B* and *E*
(3) *C* and *D*
(4) *D* and *F*

37 The Law of Conservation of Energy states that energy cannot be created or destroyed, but energy can change

(1) its total mass
(2) its total volume
(3) from one form to another
(4) from one state of matter to another

Base your answers to questions 38 and 39 on the diagram below and on your knowledge of science. The diagram represents a person using a spring scale to pull a wooden block up a ramp.



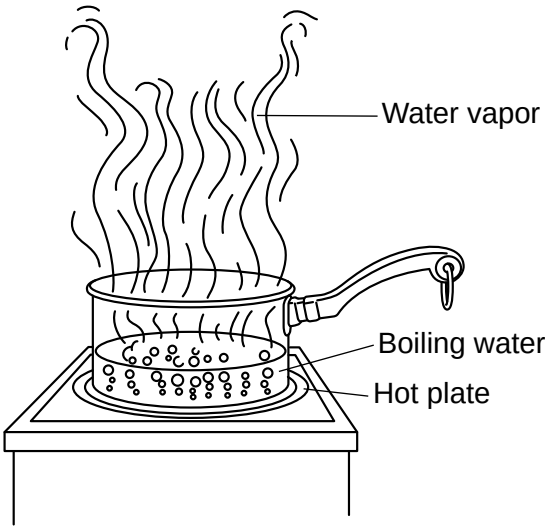
38 The plastic straws were placed under the wooden block to

(1) decrease the mass of the block
(2) decrease the amount of friction
(3) increase the surface area of the ramp
(4) increase the gravitational attraction of the block

39 The ramp would be classified as which type of simple machine?

(1) a lever
(2) a pulley
(3) a wheel and axle
(4) an inclined plane

40 The diagram below represents liquid water in a pan on a hot plate. The liquid water is boiling and changing into water vapor.



The process of boiling is considered to be a

(1) chemical change, because a new substance is formed
(2) chemical change, because a new substance is *not* formed
(3) physical change, because a new substance is formed
(4) physical change, because a new substance is *not* formed

Base your answers to questions 41 and 42 on the partial nutrition label below and on your knowledge of science. The label shows some nutritional information for a box of macaroni and cheese.

Macaroni and Cheese

Nutrition Facts
Serving Size 1 cup
Servings Per container 2

Amount Per Serving
Calories 250 Calories from Fat 110

41 The Calories on a food label indicate the amount of energy the food contains in one serving. Which form of energy is contained in food?

(1) chemical
(2) mechanical
(3) electrical
(4) light

42 Nutritious food choices have less than 30% of their Calories from fat per serving. The equation used to calculate the percent of Calories from fat is given below.

$$\% \text{ Calories from Fat} = \frac{\text{Calories from Fat}}{\text{Calories}} \times 100$$

What is the percent of Calories from fat in one serving of this macaroni and cheese?

(1) 14%
(2) 23%
(3) 36%
(4) 44%

43 The data table below shows the number of bacteria in two samples, *A* and *B*, growing in a laboratory over a five-hour period. Data were collected every half hour.

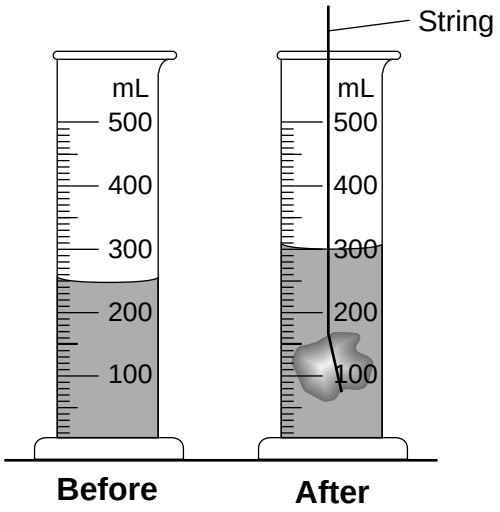
Data Table

Elapsed Time in Hours	Number of Bacteria in Sample A	Number of Bacteria in Sample B
0	1	1
0.5	2	1
1.0	4	2
1.5	8	2
2.0	16	4
2.5	32	4
3.0	64	8
3.5	128	8
4.0	256	16
4.5	512	16
5.0	1024	32

If the pattern of growth continues, how many bacteria will be in sample *B* when six hours have elapsed?

(1) 32
(2) 64
(3) 1024
(4) 2048

44 The diagram below represents a graduated cylinder containing water before and after a rock suspended on a string is lowered into it.



What is the approximate volume of the rock suspended in the graduated cylinder?

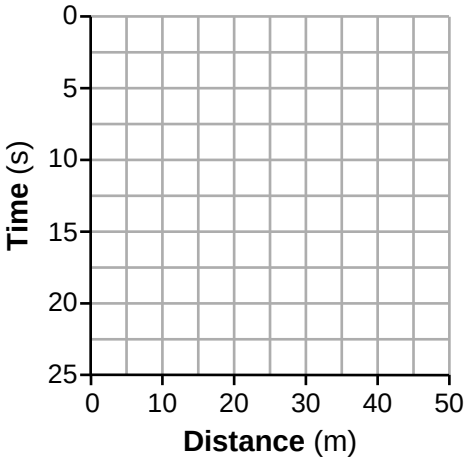
(1) 50 mL
(2) 100 mL
(3) 250 mL
(4) 300 mL

45 The data table below shows information gathered from a science experiment. Time was measured in seconds (s) and distance was measured in meters (m).

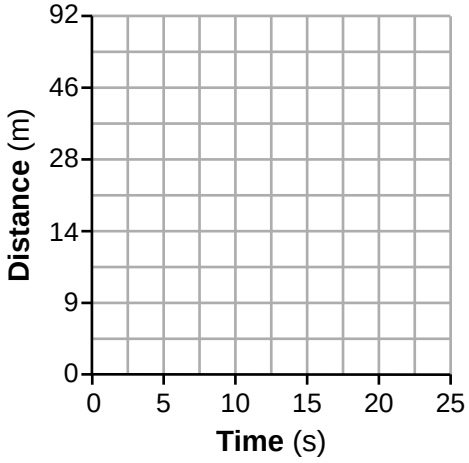
Time vs. Distance

Time (s)	**Distance** (m)
0	0
5	9
10	14
15	28
20	46

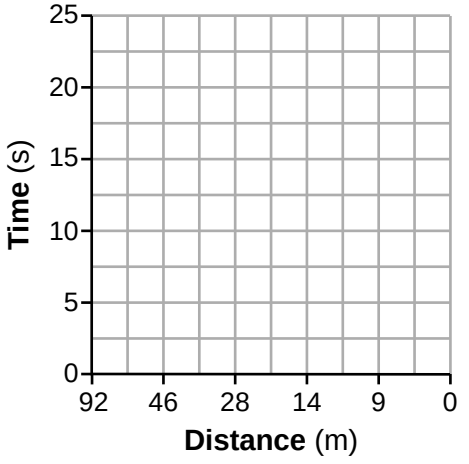
Which grid is correctly designed to show these data in a line graph?



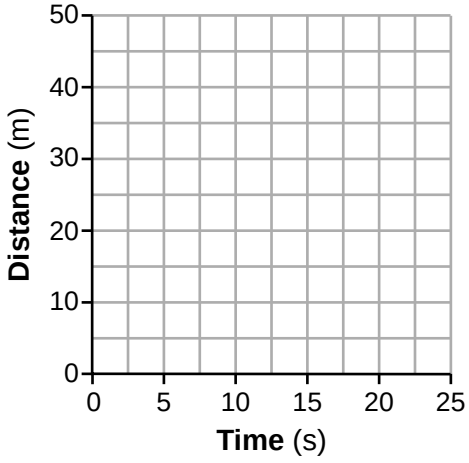
(1)



(3)



(2)



(4)

Part II

Directions (46–85): Record your answers in the spaces provided below each question.

Base your answers to questions 46 through 48 on the information below and on your knowledge of science.

A student is setting up an experiment. The student has twenty identical young plants and will try to answer this question: How does the amount of water given to these plants each day affect how tall the plant will grow?

46 State an appropriate hypothesis for this experiment. [1]

47 Identify *one* condition, other than identical young plants, that should be held constant during the experiment. [1]

48 Identify *one* measurement tool needed for this experiment and describe the type of data measured by this tool. [1]

Measurement tool: _____

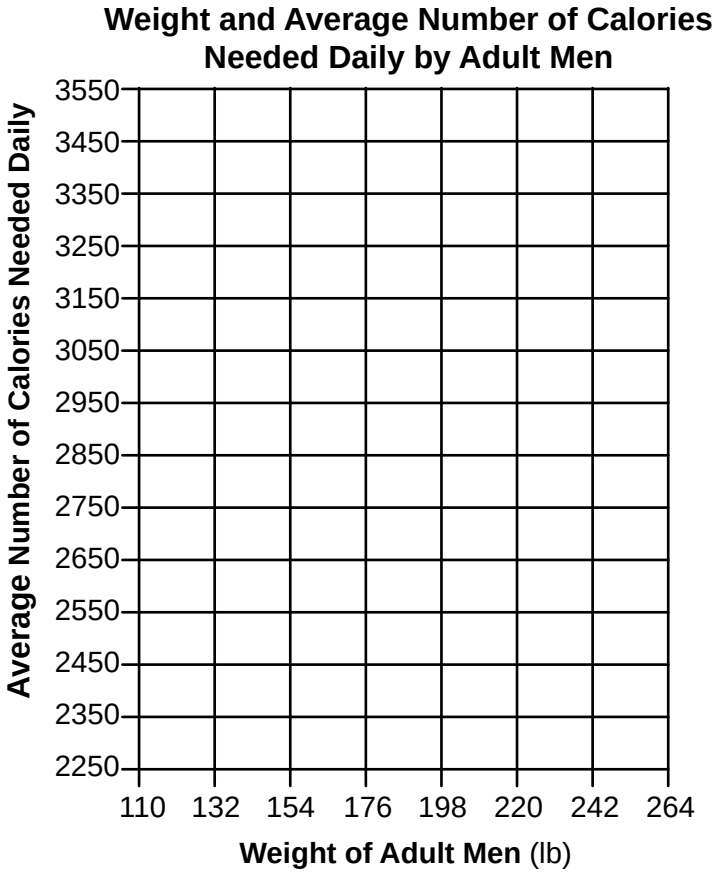
Type of data measured by tool: _____

Base your answers to questions 49 through 51 on the data table below and on your knowledge of science. The data table shows the average number of Calories needed daily by adult men of different weights, measured in pounds (lb), to maintain a steady weight. All of the men performed moderate levels of physical activity each day.

Data Table

Weight of Adult Men (lb)	**Average Number of Calories Needed Daily**
132	2250
154	2450
176	2650
198	2850
220	3050
242	3250

49 On the graph below, use an **X** to plot the average number of Calories needed daily for each of the men's weights given on the data table. Connect the **X**s with a solid line. [1]



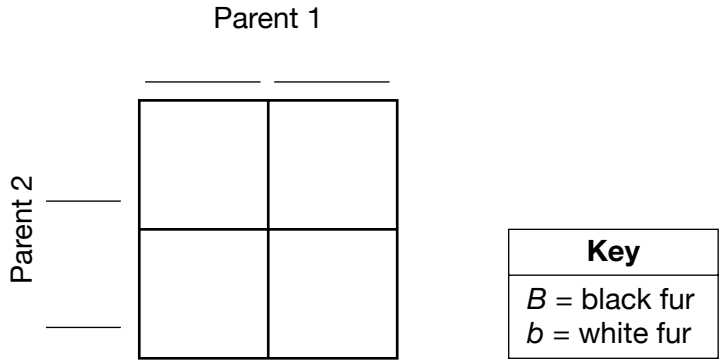
50 Describe the general relationship between the weight of adult men and the average number of Calories needed daily to maintain a steady weight. [1]

51 A 154-lb adult man performs a moderate level of physical activity and regularly consumes 2700 Calories a day. State whether the weight of the man will most likely decrease, increase, or remain the same. Use information from the data table to explain your answer. [1]

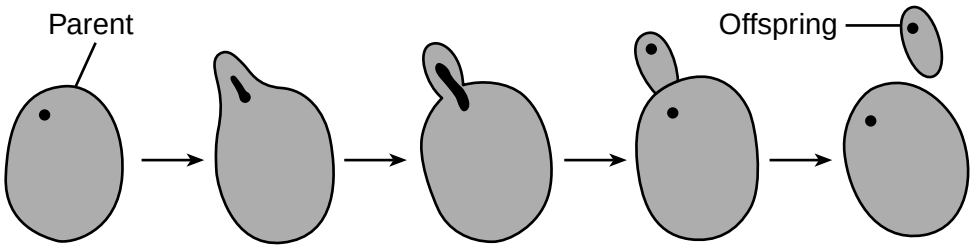
The weight of the man will _____

Explanation: _____

52 In guinea pigs, the gene for black fur, *B*, is dominant over the gene for white fur, *b*. Complete the Punnett square below to show the results of *one* possible cross between two guinea pigs with black fur. [1]



53 The diagram below represents the reproduction of a single-celled organism.

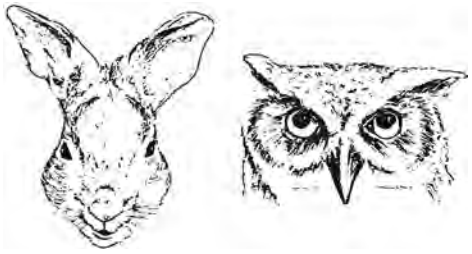


Give *one* piece of evidence from the diagram that indicates that this organism reproduces *asexually*. [1]

_____

_____

Base your answers to questions 54 and 55 on the diagrams below and on your knowledge of science. The diagrams represent a rabbit and an owl. Rabbits eat only plants and typically feed during the day in open areas such as fields and meadows. Owls eat only rabbits and other small animals and hunt mainly at night.



Rabbit Owl

54 Identify *one* physical adaptation represented in the diagram that helps the rabbit survive in its environment. Describe how this adaptation helps the rabbit to survive. [1]

Physical adaptation: _____

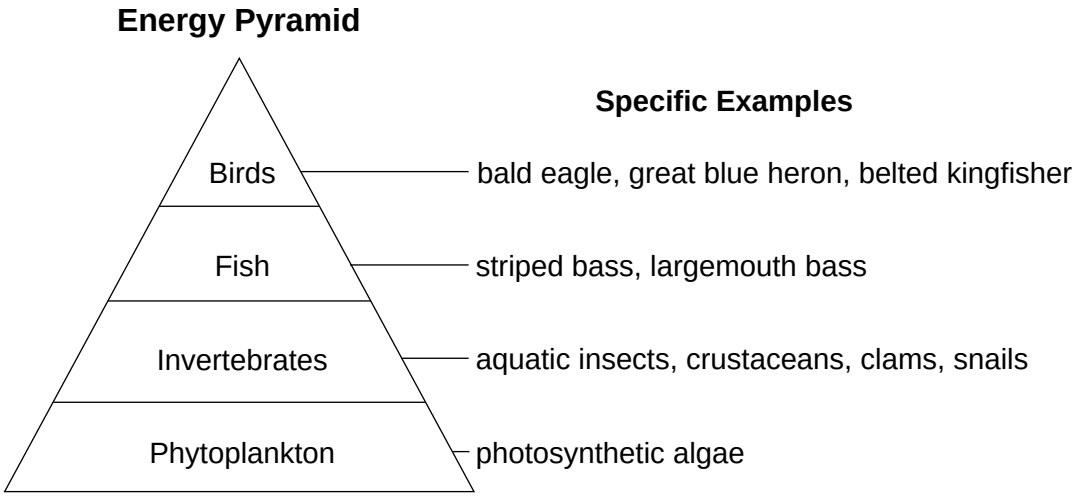
Description: _____

55 Organisms are classified as carnivores, omnivores, producers, or herbivores. Identify the classification of the rabbit and the owl based on how they obtain their food. [1]

Rabbit: _____

Owl: _____

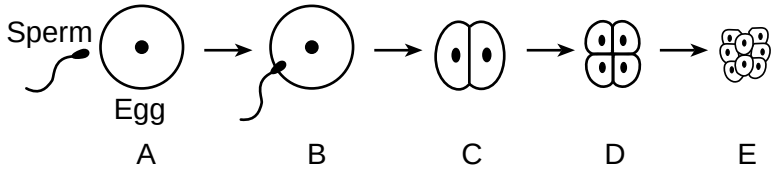
Base your answers to questions 56 and 57 on the energy pyramid below, which shows feeding relationships between organisms in a section of the Hudson River near Albany, New York. Some specific examples of organisms in the pyramid are provided.



56 Explain why the bottom of the energy pyramid is larger than the top. [1]

57 Explain why invertebrates are placed directly above the phytoplankton in this energy pyramid. [1]

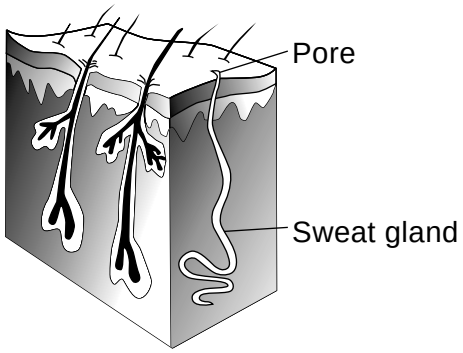
The diagram below represents the formation of a multicellular organism at different stages of early development. The stages are labeled *A* through *E*. The sperm and egg are labeled in stage *A*.



58 Identify the sexual reproductive process that is occurring at stage *B*. [1]

59 The diagram below represents a magnified cross section of human skin. The skin is an organ in the human excretory system. Two structures in the skin are labeled.

Human Skin



Describe *one* way the release of sweat allows the skin to function as part of the human excretory system. [1]

_____

Base your answers to questions 60 and 61 on the diagram below and on your knowledge of science. The diagram represents a structure found in the nucleus of a cell. Some genes are represented by dark bands. Other genes are represented by white bands.

Genetic Material

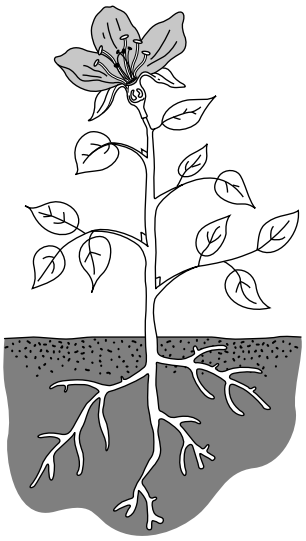
60 Identify the name of the structure represented in the diagram that is composed of genes. [1]

_____

61 Genes are composed of hereditary material. Identify this hereditary material. [1]

_____

Base your answers to questions 62 through 64 on the diagram below and on your knowledge of science. The diagram represents a green plant with a flower.



62 Describe *one* function of the roots. [1]

_____

63 Identify *one* plant structure in this diagram that mainly carries out photosynthesis. [1]

_____

64 Seeds are produced during sexual reproduction. Describe *one* function of the seeds produced by plants. [1]

_____

65 The chart below lists the names of several human diseases and their causes.

Some Human Diseases and Their Causes

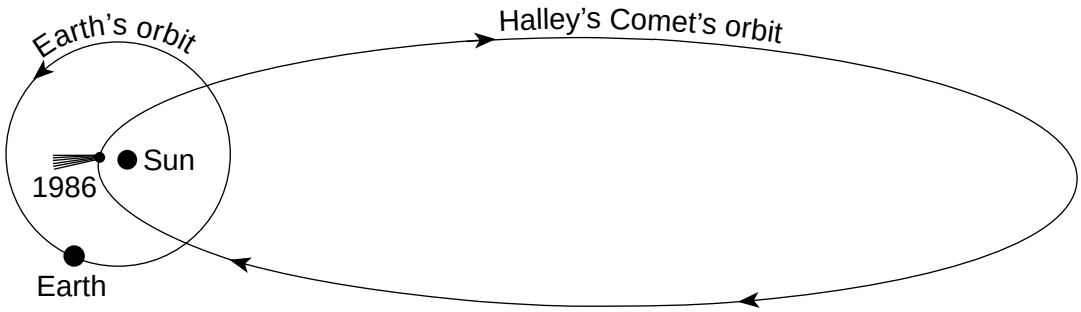
Disease	Cause
anemia	lack of iron in diet
athlete's foot	invading fungus
botulism	bacteria in uncooked food
diabetes	malfunctioning pancreas
hemophilia	inherited trait

Identify *two* diseases listed on the chart that are the result of damage by infection from another organism. [1]

_____ and _____

Base your answers to questions 66 and 67 on the diagram below and on your knowledge of science. The diagram represents the orbits of Earth and Halley's Comet around the Sun in our solar system. The position of Halley's Comet in 1986 is represented.

Earth and Halley's Comet Orbiting the Sun



(Not drawn to scale)

66 State the number of days it takes Earth to complete one orbit around the Sun. [1]

_____ **days**

67 Explain why Halley's Comet is part of our solar system. [1]

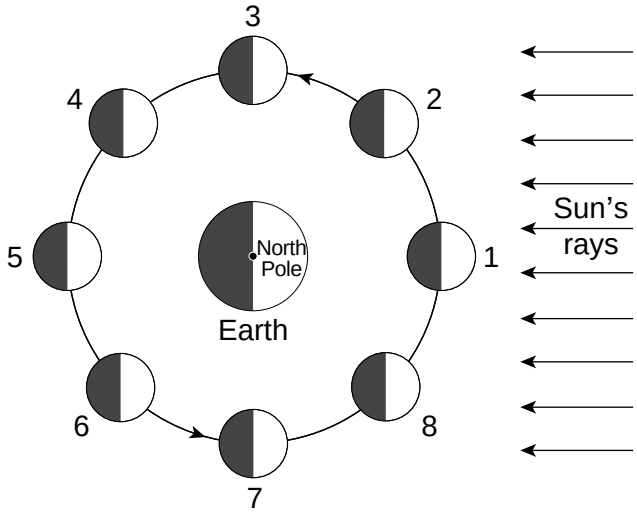
_____

_____

_____

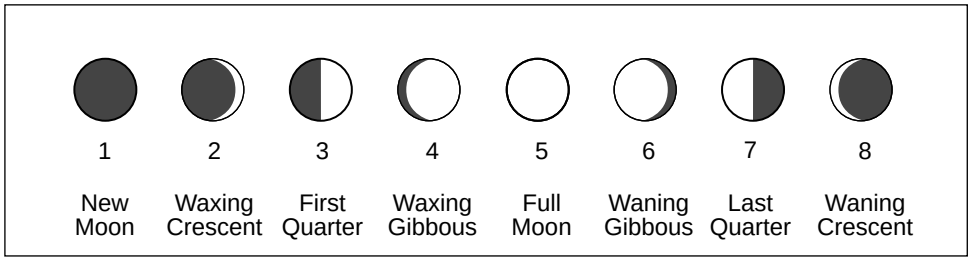
Base your answers to questions 68 through 70 on the diagrams below and on your knowledge of science. Numbers 1 through 8 on diagram *A* represent positions of the Moon in its orbit around Earth. Diagram *B* represents the Moon's phases observed from Earth's Northern Hemisphere when the Moon is at the position shown.

Diagram A



(Not drawn to scale)

Diagram B



(Not drawn to scale)

68 It takes the Moon approximately 30 days to complete one cycle of the phases. Determine the number of days between the First Quarter Moon phase and the Last Quarter Moon phase. [1]

_____ **days**

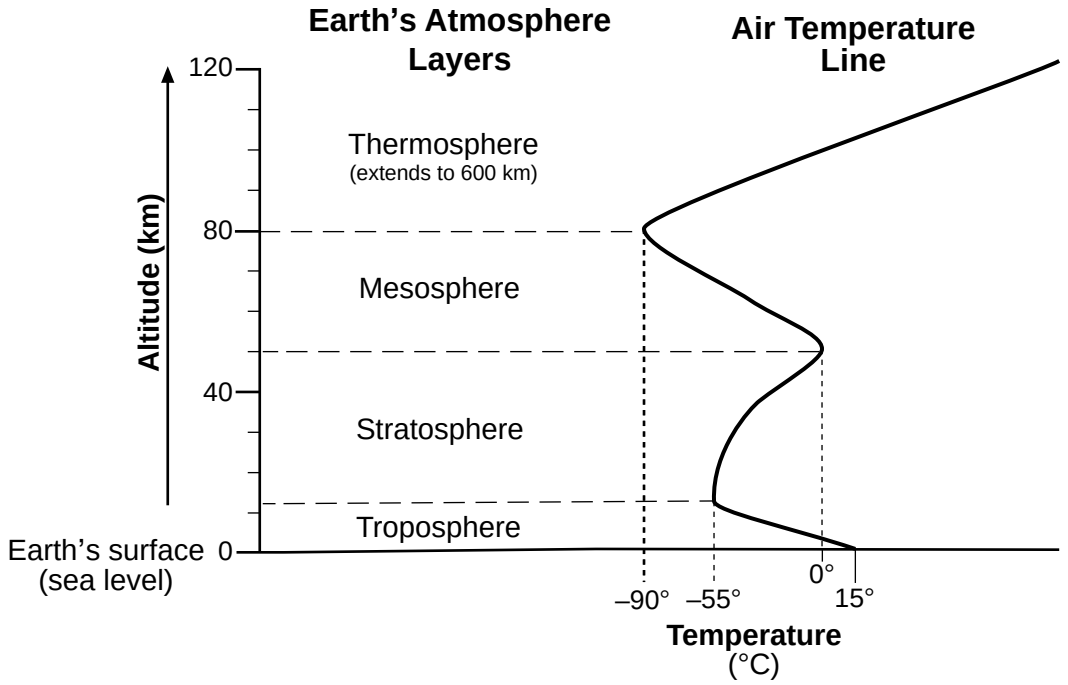
69 Identify *one* Moon position where an eclipse would most likely occur. [1]

Position number: _____

70 Identify another natural cyclic event, other than phases and eclipses, that is caused by the Moon's gravitational pull on Earth. [1]

_____

Base your answers to questions 71 through 73 on the diagram below and on your knowledge of science. The diagram represents four different layers of Earth's atmosphere above Earth's surface, measured in kilometers (km). The horizontal dashed lines represent the boundary between each atmospheric layer. The air temperature line represents the relationship between altitude (km) and air temperature measured in degrees Celsius (°C).



71 More than 50% of the gas molecules in Earth's atmosphere are found in the troposphere layer. Identify the force responsible for pulling these molecules closer to Earth's surface. [1]

_____

72 The greatest concentration of ozone gas is located at an altitude between 20 and 30 kilometers. Identify the layer of Earth's atmosphere in which the greatest concentration of ozone gas is located. [1]

_____

73 Calculate the temperature difference from the bottom of the mesosphere to the top of the mesosphere as shown on the air temperature line. [1]

_____ **°C**

Base your answers to questions 74 and 75 on the table below and on your knowledge of science. The table shows Mohs hardness scale, which is commonly used to identify minerals. The softest mineral, talc, has a value of 1. The hardest mineral, diamond, has a value of 10. The approximate hardnesses of some common objects are listed next to Mohs scale.

Mohs Hardness Scale

Mineral	Hardness Value
Talc	1
Gypsum	2
Calcite	3
Fluorite	4
Apatite	5
Feldspar	6
Quartz	7
Topaz	8
Corundum	9
Diamond	10

Hardness of Common Objects

- Fingernail (2.5) — Gypsum (2)
- Iron nail (4.5) — Fluorite (4)
- Glass (5.5) — Apatite (5)
- Steel file (6.5) — Feldspar (6)

74 Identify *one* mineral on Mohs hardness scale that would be soft enough for an iron nail to scratch. [1]

_____

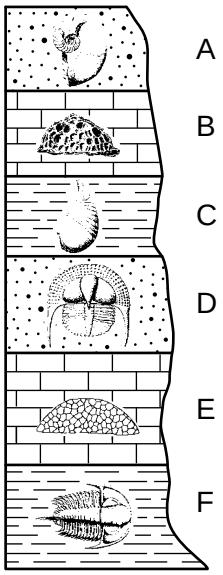
75 Explain why the property of hardness is usually better to use to identify a mineral instead of the color of the mineral. [1]

_____

_____

_____

Base your answers to questions 76 and 77 on the diagram below and on your knowledge of science. The diagram represents a cross section of exposed rock layers *A* through *F* that contain fossils. The rock layers have *not* been overturned.



76 Identify the letter of the layer that contains the oldest fossil. Explain why you selected that layer. [1]

Layer: _____

Explanation: _____

_____

77 Explain why the study of fossils is important to scientists. [1]

_____

_____

_____

78 Describe the best method for separating small pieces of iron from a mixture of sand and iron when the particles of sand and iron are identical in size. [1]

_____

Base your answers to questions 79 and 80 on the chart below and on your knowledge of science. The chart shows the Enhanced Fujita Scale, which is used to measure the strength of a tornado.

Enhanced Fujita Scale

Rating	Estimated Wind Speeds in Miles per Hour	Typical Damage
EF0	65–85	• branches broken • chimneys damaged
EF1	86–110	• cars pushed off roads • shingles torn from roofs
EF2	111–135	• roofs torn from some buildings • some trees torn from ground or split
EF3	136–165	• walls and roofs torn from buildings • most trees uprooted
EF4	166–200	• cars thrown • houses collapsed
EF5	200+	• houses collapsed and torn from foundations • reinforced-concrete buildings damaged

79 The wind speed of a tornado was estimated to be 100 miles per hour. Identify its rating on the Enhanced Fujita Scale and describe *one* type of damage that most likely occurred. [1]

Rating: _____

Type of damage: _____

80 Describe *one* action that residents of an area should take when a tornado is approaching. [1]

_____

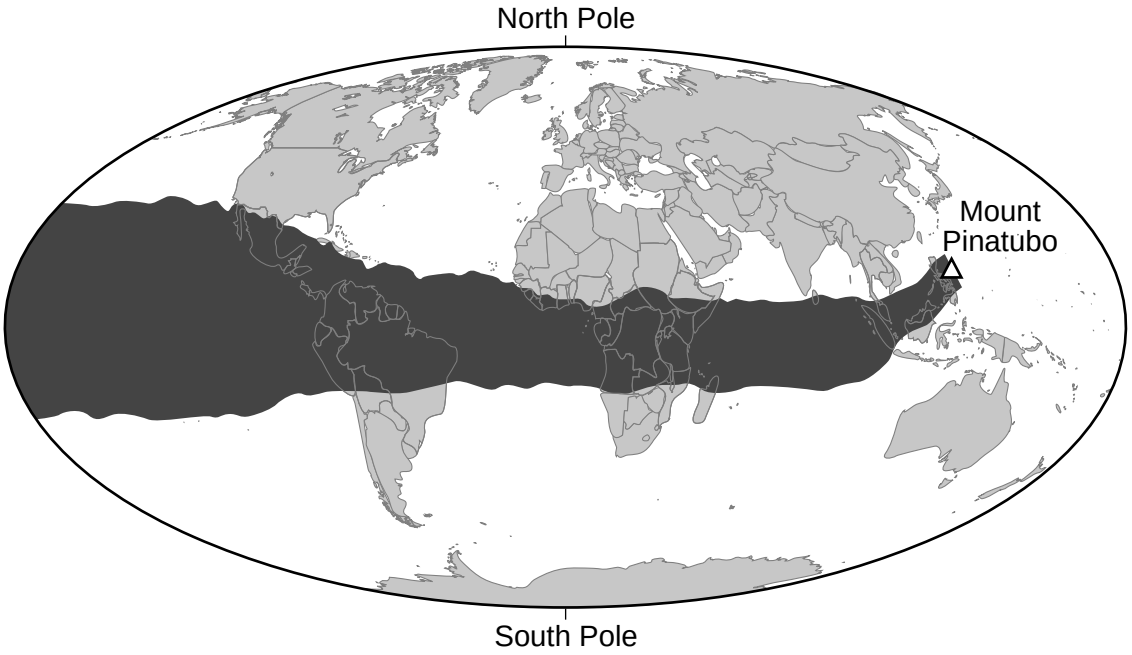
_____

_____

Base your answers to questions 81 through 83 on the information and map below, and on your knowledge of science. The map shows the location of Mount Pinatubo, a volcano in the Philippines. The dark area represents the direction and location of the volcanic ash that spread out over the next several months following its eruption.

Mount Pinatubo in the Philippines erupted in 1991. During the eruption, ash particles were spread high into the atmosphere, and eventually circled the globe. The ash particles produced pollution that affected the climate and human health. Over time, the particles blocked some of the Sun's energy from reaching Earth.

Mount Pinatubo Ash Cloud



81 Describe the effect the ash cloud had on Earth's global temperatures. [1]

_____

_____

82 Identify the general compass direction in which the volcanic ash traveled away from Mount Pinatubo. [1]

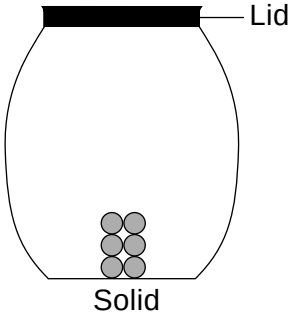
_____

83 Based on the Theory of Plate Tectonics, where are most volcanoes, like Mount Pinatubo, found? [1]

_____

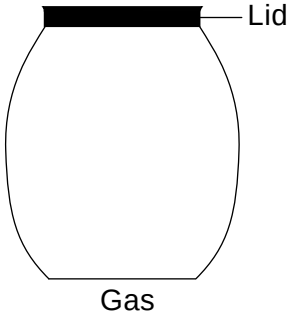
_____

Base your answers to questions 84 and 85 on the diagram below and on your knowledge of science. The diagram represents a model of six particles of a substance. The substance is in a solid phase and has been placed in a closed container.



(Not drawn to scale)

84 Use the empty closed-container below to draw a model of these six particles as they would look when the substance is in the gas phase. [1]



85 List the *three* phases of matter in order from the greatest attractive forces between particles to the least attractive forces between particles. [1]

Greatest attractive forces → Least attractive forces

For Teacher Use Only
Part II Credits

Question	Maximum Credit	Credit Allowed
46	**1**	
47	**1**	
48	**1**	
49	**1**	
50	**1**	
51	**1**	
52	**1**	
53	**1**	
54	**1**	
55	**1**	
56	**1**	
57	**1**	
58	**1**	
59	**1**	
60	**1**	
61	**1**	
62	**1**	
63	**1**	
64	**1**	
65	**1**	
66	**1**	
67	**1**	
68	**1**	
69	**1**	
70	**1**	
71	**1**	
72	**1**	
73	**1**	
74	**1**	
75	**1**	
76	**1**	
77	**1**	
78	**1**	
79	**1**	
80	**1**	
81	**1**	
82	**1**	
83	**1**	
84	**1**	
85	**1**	
Total	**40**	

GRADE 8 INTERMEDIATE-LEVEL SCIENCE