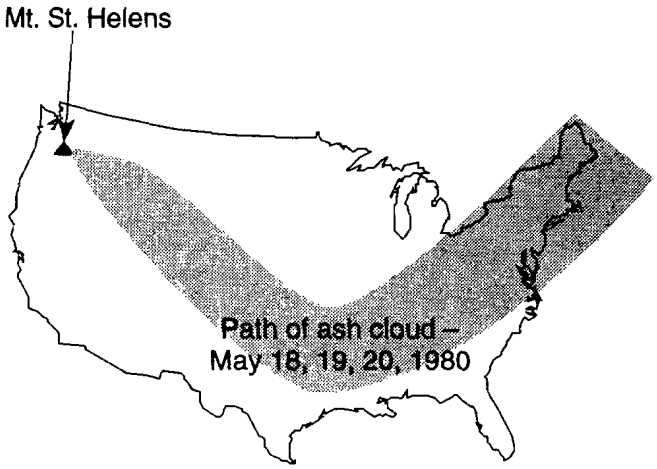
Name: **Midterm Practice**

1. The map below shows the path of an ash cloud that resulted from the Mount St. Helens volcanic eruption. The map was developed from satellite photographs.



The path of the ash cloud was most probably determined by

A) hypothesis B) inference
C) theory **D) observation**

2. Which action can be performed most accurately using only the human senses?

A) tearing a sheet of paper into squares whose sides measure 1 centimeter
B) adding 10 grams of salt to a cup of water
C) measuring the air pressure of a room
D) counting 28 shells from a beach

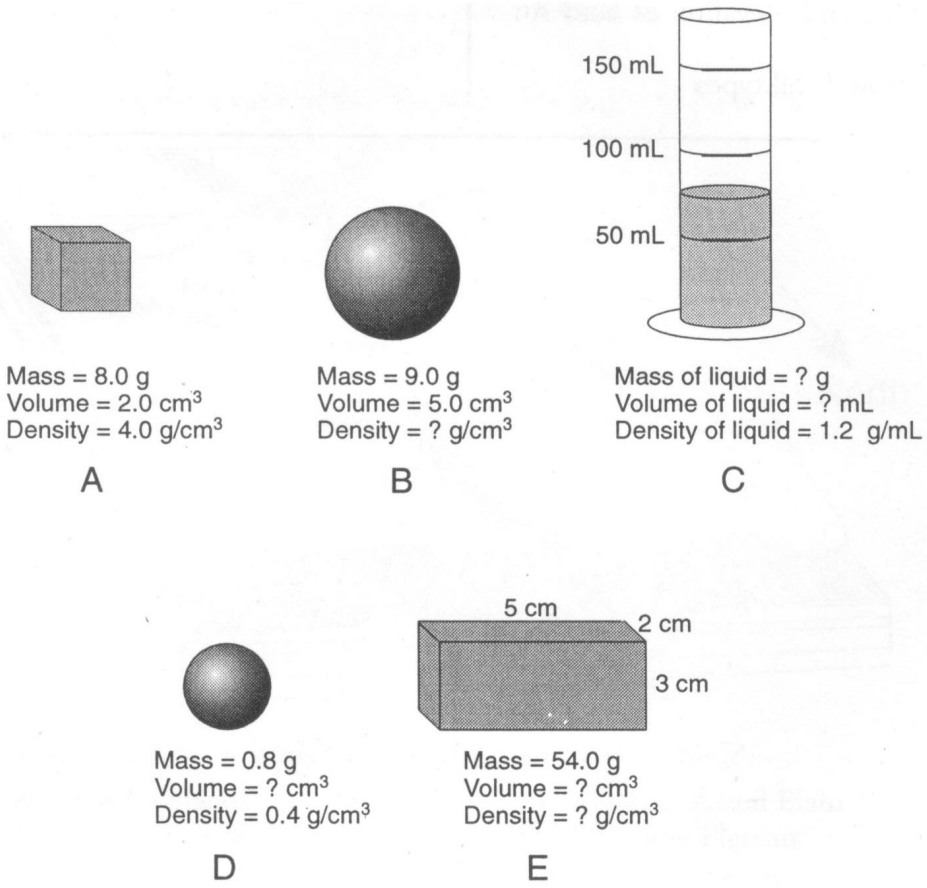
3. Which statement about a major hurricane is an inference?

A) The windspeed is measured at 200 km/hr.
B) The central air pressure is recorded at 946.0 mb.
C) A rain gauge records three inches of rain in less than one hour.
D) Damage from the storm is expected to be extensive.

4. A student examined a patch of mud and recorded several statements about footprints in the mud. Which statement is most likely an inference?

A) There are five footprints in the mud.
B) The depth of the deepest footprint is 3 centimeters.
C) The footprints were made by a dog.
D) The footprints are oriented in an east-west direction.

5. Base your answer to the following question on the diagrams below, and your knowledge of Earth science. The diagrams represent five substances, *A* through *E*, at the same temperature. Some mass, volume, and density values are indicated for each substance. Substance *C* is a liquid in a graduated cylinder. [Note that 1 cubic centimeter = 1 milliliter. Objects are not drawn to scale.]



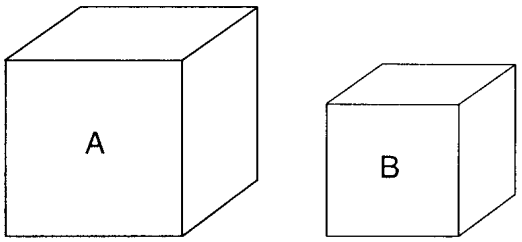
What is the volume of object *D*?

A) 1.0 cm^3 **B) 2.0 cm^3** C) 7.0 cm^3 D) 16.0 cm^3

6. The diameter through the equator of Jupiter is about 143,000 kilometers. What is this distance written in scientific notation (powers of 10)?

A) 143×10^2 km B) 1.43×10^3 km
C) 1.43×10^5 km D) 143×10^5 km

7. Base your answer to the following question on the diagrams below, which represent two different solid, uniform materials cut into cubes *A* and *B*.



Mass of A = 320 g
Volume of A = 64 cm^3

Density of B = 3 g/cm^3
Volume of B = 27 cm^3

(Not drawn to scale)

A student calculates the density of a third material as 8.3 grams per cubic centimeter instead of the accepted value of 8.0 grams per cubic centimeter. What is the student's approximate percent deviation (percent of error)?

A) 3.8% B) 30.0% C) 3.0% D) 36.1%

8. Base your answer to the following question on the data table below, which lists some properties of four minerals that are used as ores of zinc (Zn).

Mineral Property	Mineral			
	Smithsonite	**Sphalerite**	**Willemite**	**Zincite**
Composition	$ZnCO_3$	ZnS	Zn_2SiO_4	ZnO
Hardness	4–4.5	3.5–4	5.5	4
Density (g/cm^3)	4.4	4.0	4.0	5.6
Color	white, gray, green, blue, yellow	brown, yellow, red, green, black	white, yellow, green, reddish brown, black	deep red to orange yellow
Streak	white	white to yellow to brown	white	orange yellow

A sample of sphalerite has a mass of 176.0 grams. What is the volume of the sample?

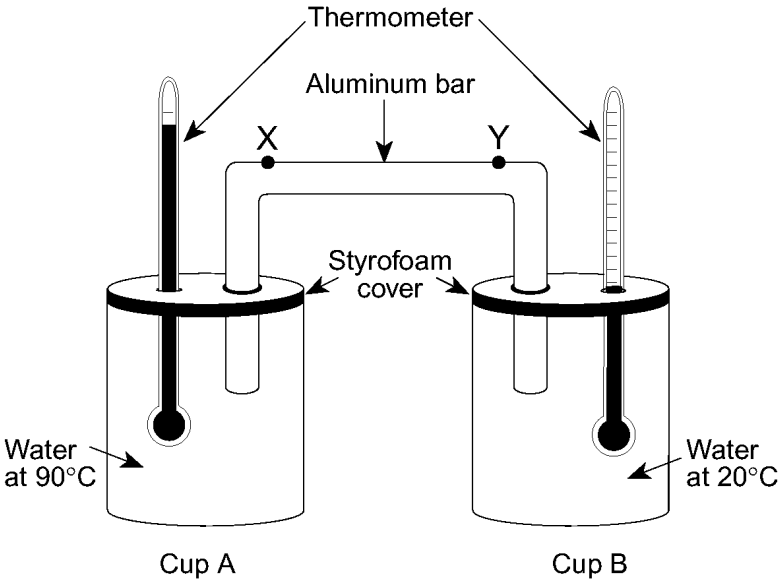
A) 22.7 cm^3 B) 31.4 cm^3 C) 40.0 cm^3 **D) 44.0 cm^3**

9. A pebble has a mass of 35 grams and a volume of 14 cubic centimeters. What is its density?

A) 0.4 g/cm^3 **B) 2.5 g/cm^3**
C) 490 g/cm^3 D) 4.0 g/cm^3

10. Base your answer to the following question on the information about a laboratory procedure, diagram, and data table below.

Hot water at 90°C is poured into cup *A*. Cool water at 20°C is poured into cup *B*. Styrofoam covers are placed on the cups. An aluminum bar and a thermometer are placed through holes in each cover. Points *X* and *Y* are locations on the aluminum bar. The data table shows temperature readings taken every minute for 20 minutes.



	Temperature of Water (°C)	
Minute	**Cup *A***	**Cup *B***
0	90	20
1	88	20
2	86	20
3	85	21
4	83	21
5	82	22
6	81	22
7	80	22
8	79	22
9	78	23
10	77	23
11	76	23
12	75	23
13	74	23
14	73	23
15	72	24
16	71	24
17	70	24
18	69	24
19	68	25
20	67	25

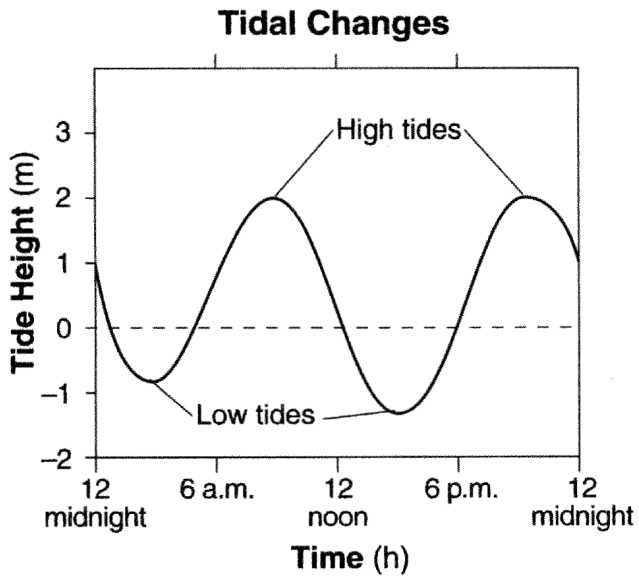
The rate of temperature change for the water in cup *A* for the first 10 minutes was approximately

A) 0.77 C°/min **B) 1.3 C°/min** C) 7.7 C°/min D) 13.0 C°/min

11. A 25-gram sample of halite was placed in a jar with five other mineral samples and water. The jar was shaken vigorously for 5 minutes. The halite sample was then found to have a mass of 15 grams. What was the rate of weathering of the halite sample?

A) 0.50 g/min **B) 2.0 g/min**
C) 3.0 g/min D) 10. g/min

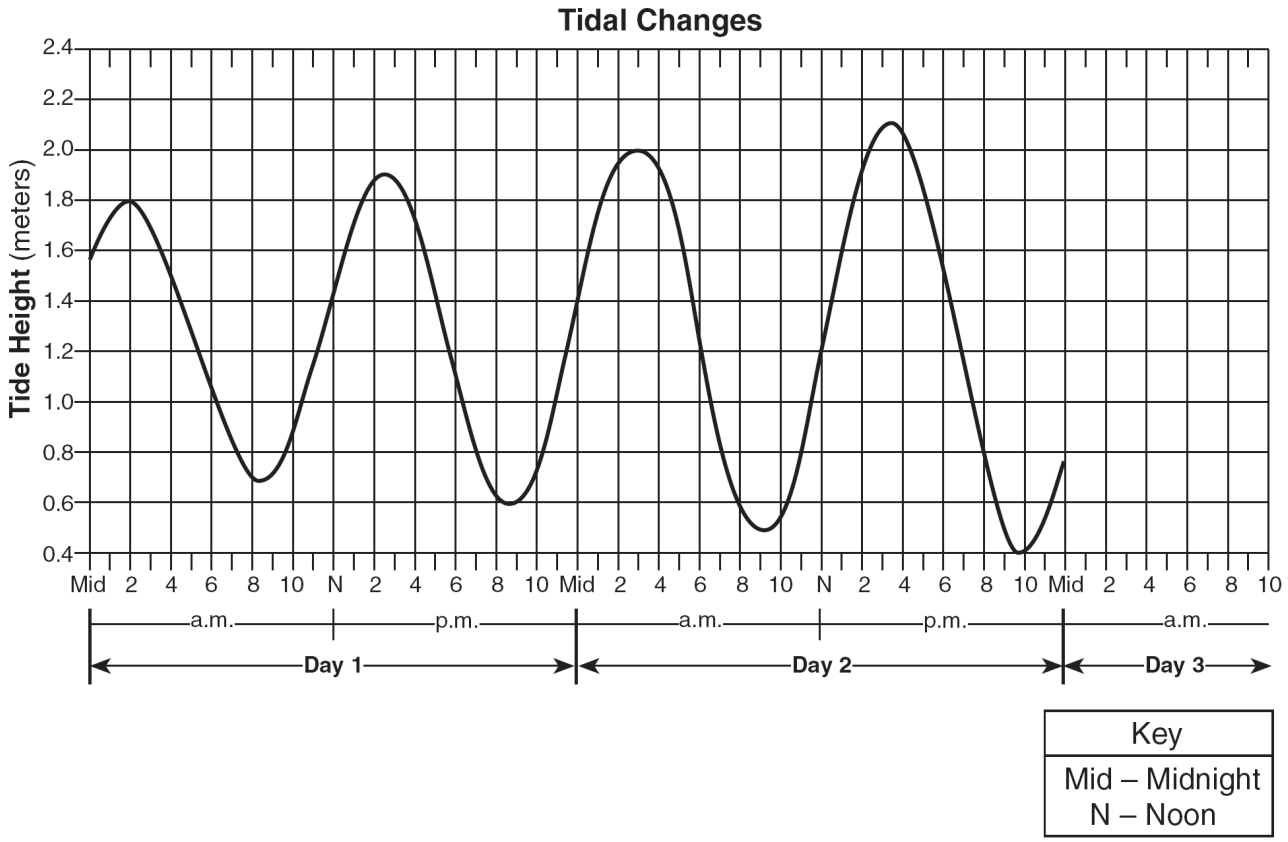
12. The graph below shows the tidal changes in ocean water level, in meters, recorded at a coastal location on a certain day.



Approximately how many hours apart were the two high tides?

A) 6 h **B) 12 h** C) 18 h D) 24 h

13. Base your answer to the following question on the graph below, which shows two days of tidal data from a coastal location in the northeastern United States.



If the pattern shown continues, the most likely height and time for the first high tide on day 3 would be

A) 2.2 meters at 4 a.m.
B) 2.3 meters at 4 a.m.
C) 2.2 meters at 5 a.m.
D) 2.3 meters at 5 a.m.

14. The rising and setting of the Sun are examples of

A) noncyclic events
B) unrelated events
C) predictable changes
D) random motion

15. In which atmospheric temperature zone does most precipitation occur?

A) thermosphere
B) mesosphere
C) stratosphere
D) troposphere

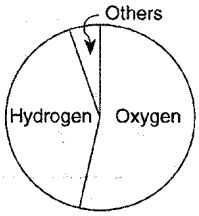
16. At what approximate altitude in the atmosphere can stratospheric ozone be found?

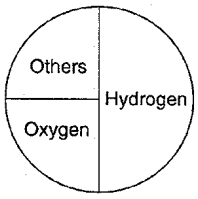
A) 10 km
B) 30 km
C) 70 km
D) 100 km

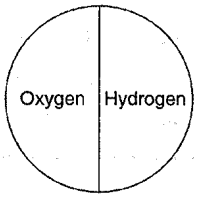
17. Compared to the oceanic crust, the continental crust is

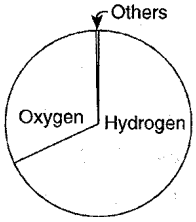
A) less dense and more basaltic
B) less dense and more felsic
C) more dense and more granitic
D) more dense and more mafic

18. Which graph best represents the percentage by volume of the elements making up the Earth's hydrosphere?

A)


B)


C)


D)


19. Which two elements make up the greatest percentages by mass in Earth's crust?

A) oxygen and potassium
B) oxygen and silicon
C) aluminum and potassium
D) aluminum and silicon

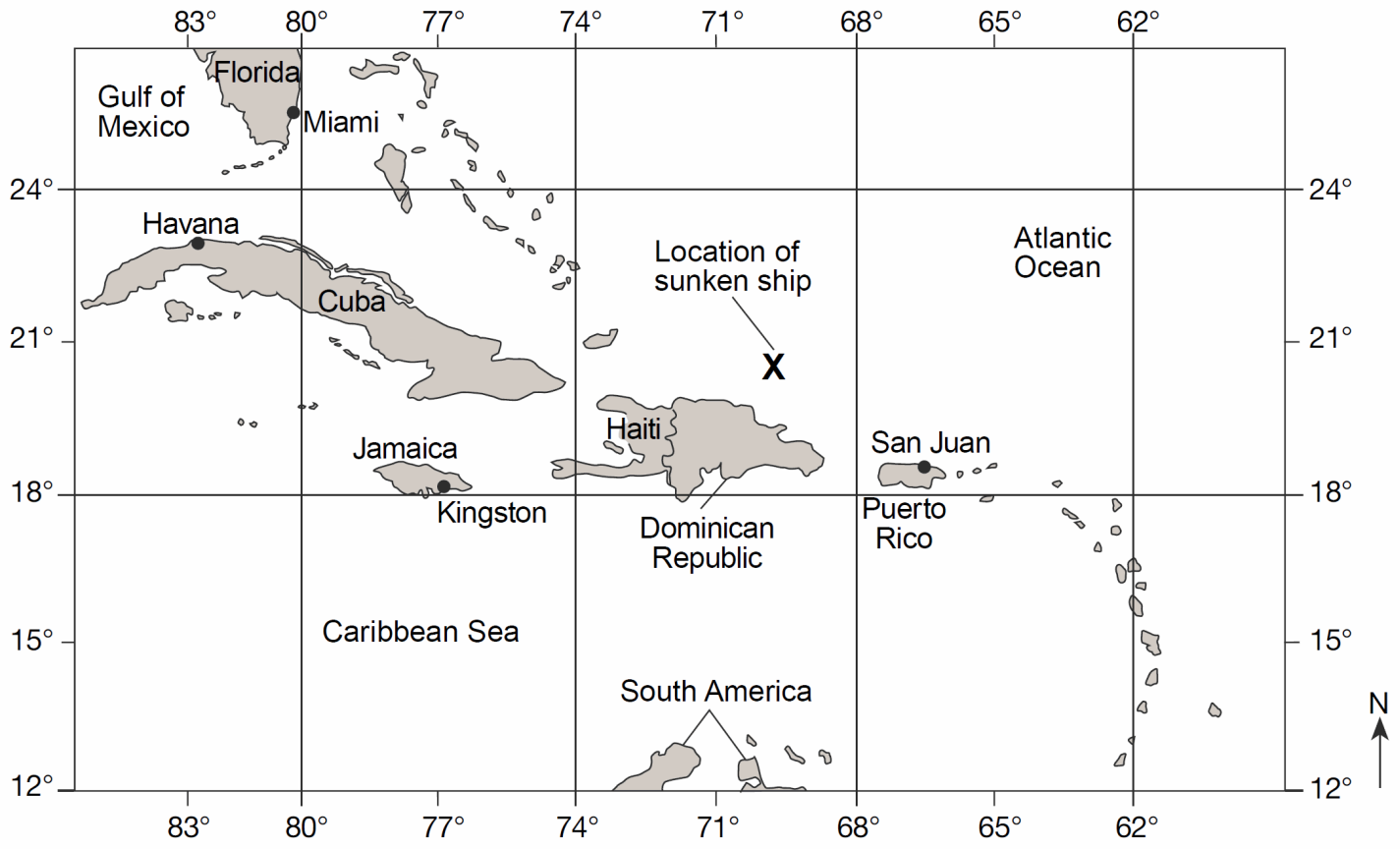
20. In which Earth layer does the pressure reach 3.5 million atmospheres?

A) crust B) stiffer mantle
C) outer core **D) inner core**

21. Base your answer to the following question on the passage and map below. The map shows sections of the Atlantic Ocean, the Caribbean Sea, and the Gulf of Mexico.

Shipwreck

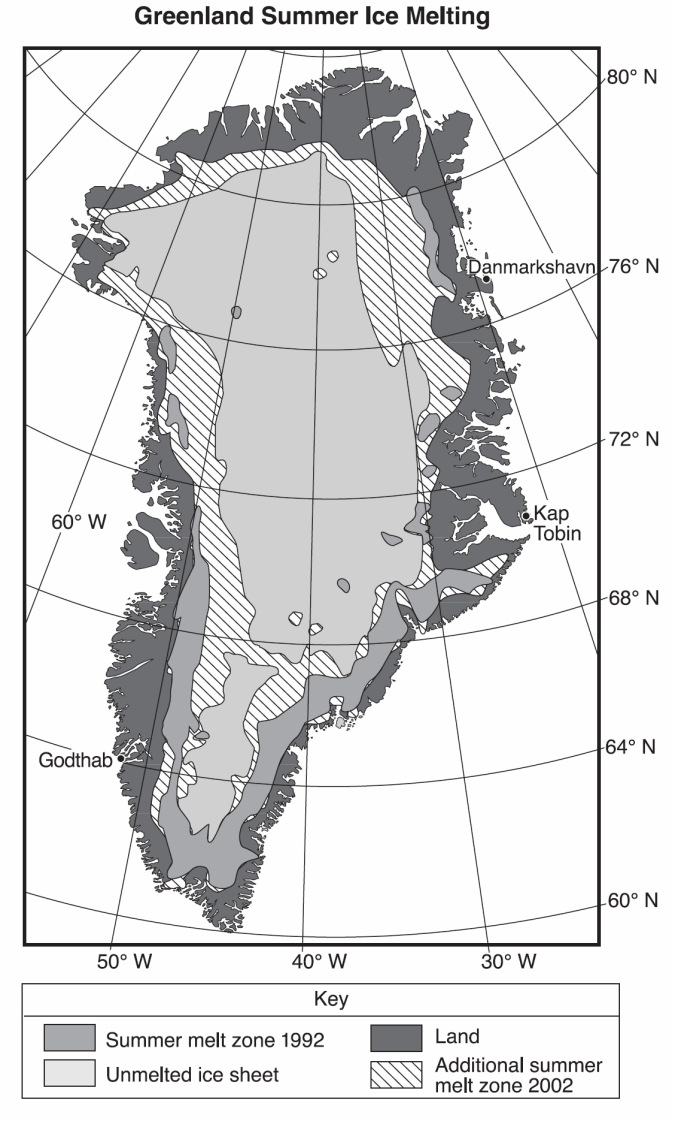
In 1641, the crew of the ship *Concepcion* used the Sun and stars for navigation. The crew thought that the ship was just north of Puerto Rico, but ocean currents had carried them off course. The ship hit a coral reef and sank off the coast of the Dominican Republic. The **X**on the map marks the location of the sunken ship.



What is the approximate latitude and longitude of the sunken ship?

A) 20.5° N 70° E **B) 20.5° N 70° W** C) 20.5° S 70° E D) 20.5° S 70° W

22. Base your answer to the following question on the following map and passage. The map shows the extent of summer ice-melt zones on Greenland in 1992 and 2002. The summer melt zone is an area where summer heat turns snow and ice around the edges of the ice sheet into slush and ponds of meltwater. Three coastal locations are shown on the map.



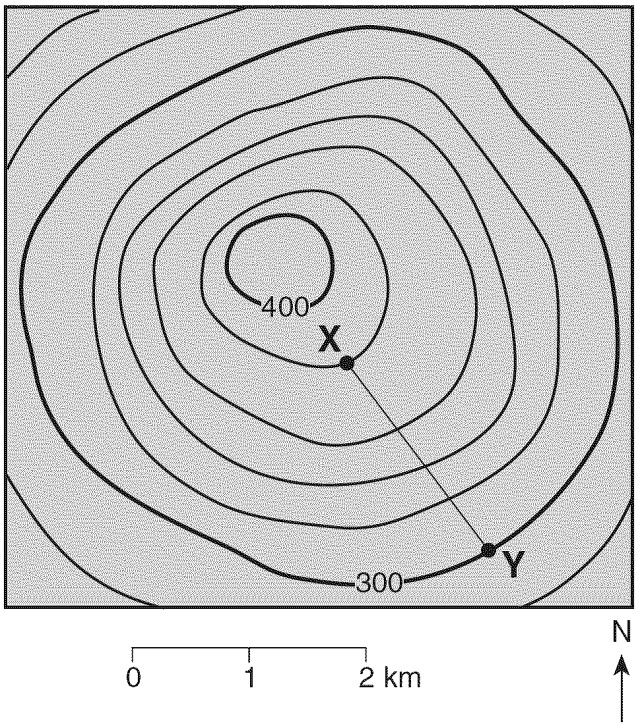
Arctic Meltdown

Scientists are concerned because average arctic temperatures are rising. The Greenland Ice Sheet, the dominant area of continental ice in the arctic region, broke all previous records for melting in 2002. In 2004, the total amount of ice resting on top of the continental crust in the arctic region was estimated to be about 3,100,000 cubic kilometers. If all this ice were to melt, the ocean levels would rise approximately 8.5 meters. A reduction in ice-covered areas exposes more land surfaces. This increases absorption of insolation and accelerates arctic warming. Scientists continue to collect data to define the role of greenhouse gases in the warming of the arctic region.

What is the approximate latitude and longitude of Godthab, Greenland?

A) 51.5° N 64° W B) 70.5° N 22° W **C) 64° N 51.5° W** D) 22° N 70.5°W

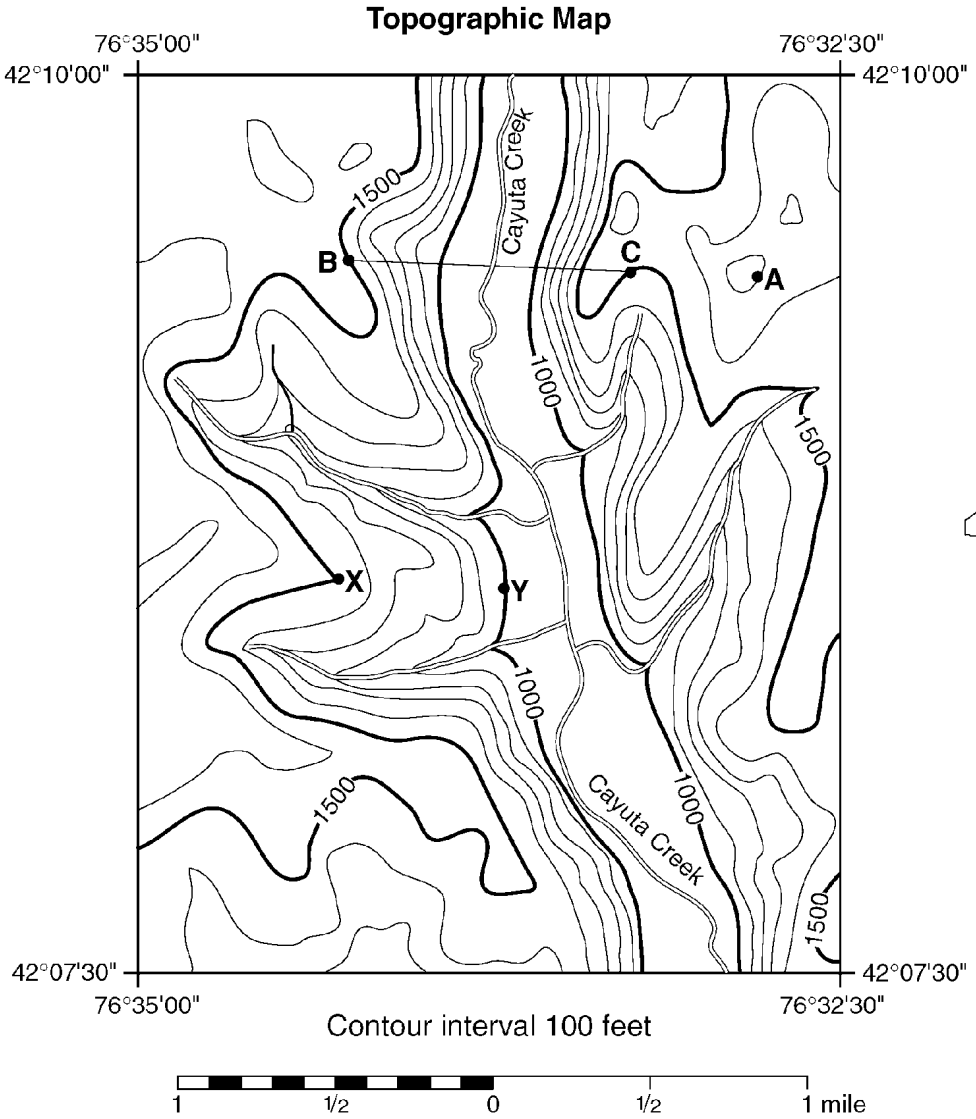
23. The topographic map below shows a hill. Points *X* and *Y* represent locations on the hill's surface. Elevations are shown in meters.



What is the gradient between points *X* and *Y*?

A) 40 m/km B) 80 m/km
C) 100 m/km D) 120 m/km

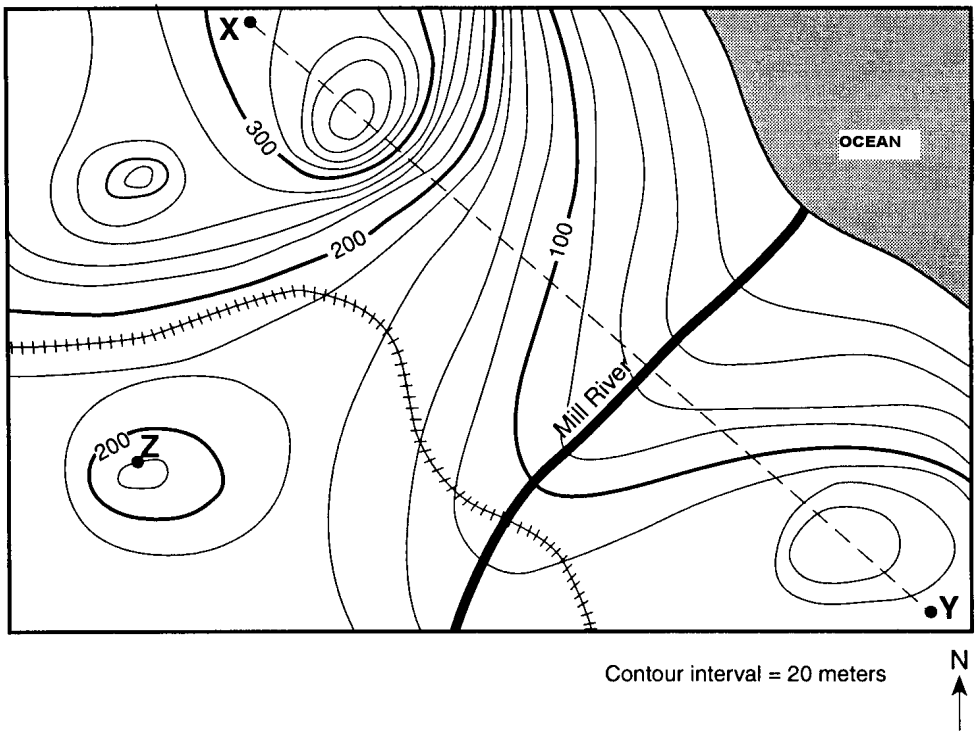
24. Base your answer to the following question on the maps below. Points *A, B, C, X,* and *Y* are locations on the topographic map. The small map identifies the New York State region shown in the topographic map.



What is the approximate gradient between point *X* and point *Y*?

A) 100 ft/mi B) 250 ft/mi C) 500 ft/mi **D) 1,000 ft/mi**

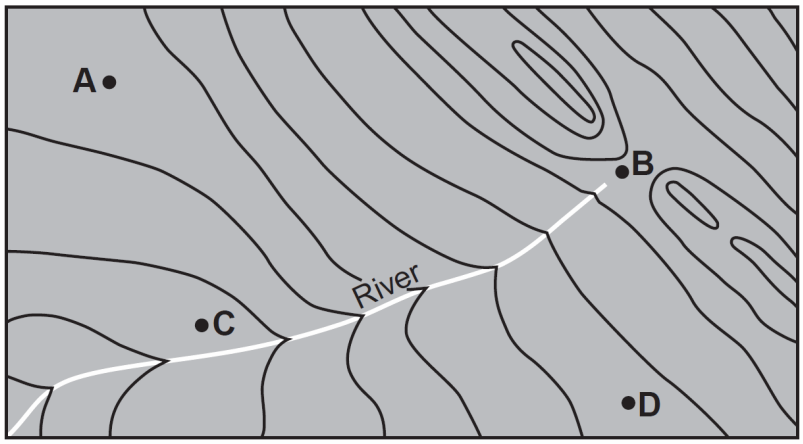
25. Base your answer to the following question on the topographic map below. Points *X*, *Y*, and *Z* are locations on the map. Elevations are expressed in meters.



Mill River generally flows toward the

A) southeast B) southwest **C) northeast** D) northwest

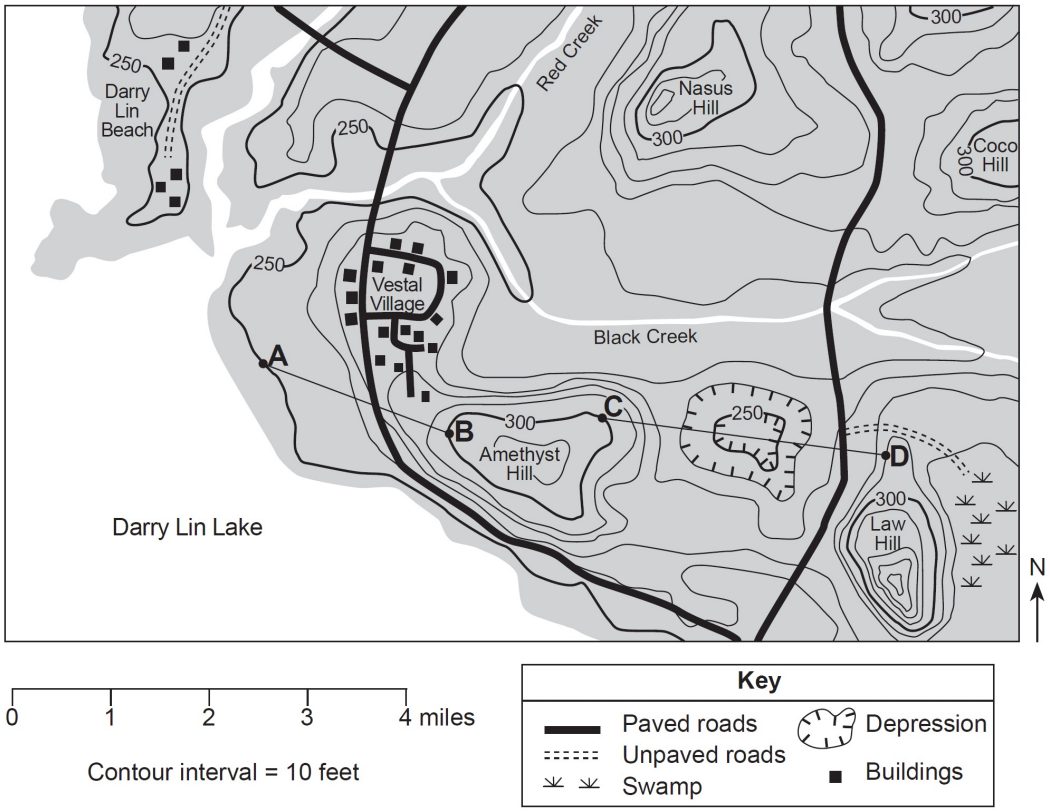
26. Four locations, *A, B,* C, and D, are represented on the topographic map below.



Which lettered location has the highest elevation?

A) *A* **B) *B*** C) *C* D) *D*

Base your answers to questions **27** and **28** on the topographic map below and on your knowledge of Earth Science. Points *A*, *B*, *C*, and *D* represent locations on the surface of Earth. Elevations are measured in feet.



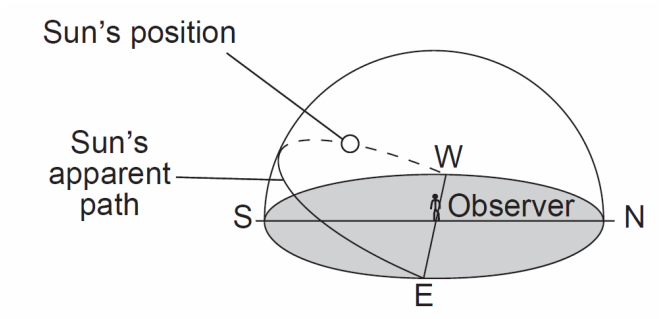
27. What is the approximate gradient from point *A* to point *B* on the map?

A) 25 feet per mile
B) 50 feet per mile
C) 75 feet per mile
D) 100 feet per mile

28. In which general direction does Red Creek flow?

A) northeast
B) southeast
C) southwest
D) northwest

29. The diagram below represents the apparent path of the Sun as seen by an observer at 65° N on March 21.

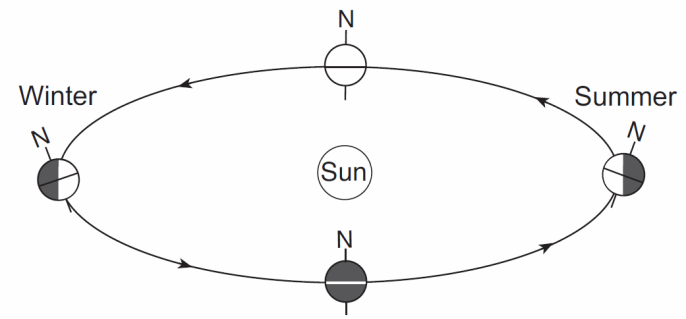


The Sun's position shown in the diagram was observed closest to which time of day?

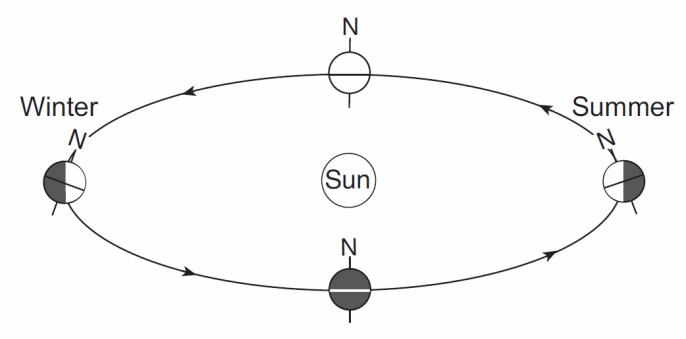
A) 9 a.m.
B) 11 a.m.
C) 3 p.m.
D) 6 p.m.

30. Which diagram best represents the tilt of Earth's axis that causes the Northern Hemisphere seasons shown? (Diagrams are not drawn to scale.)

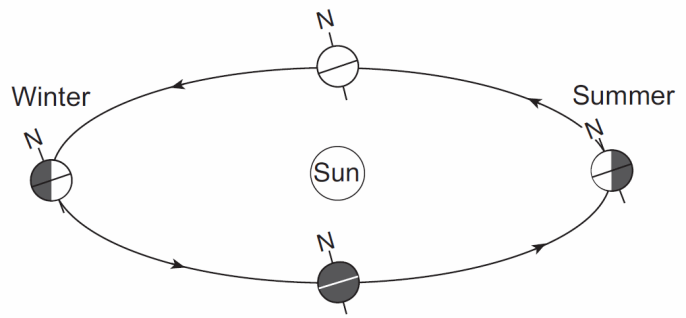
A)



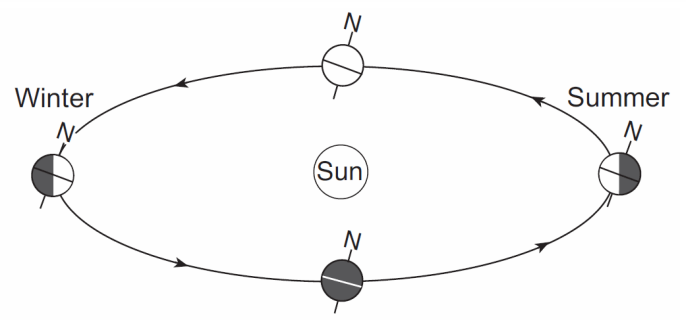
B)



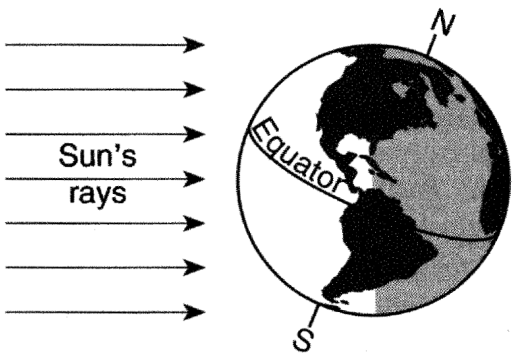
C)



D)



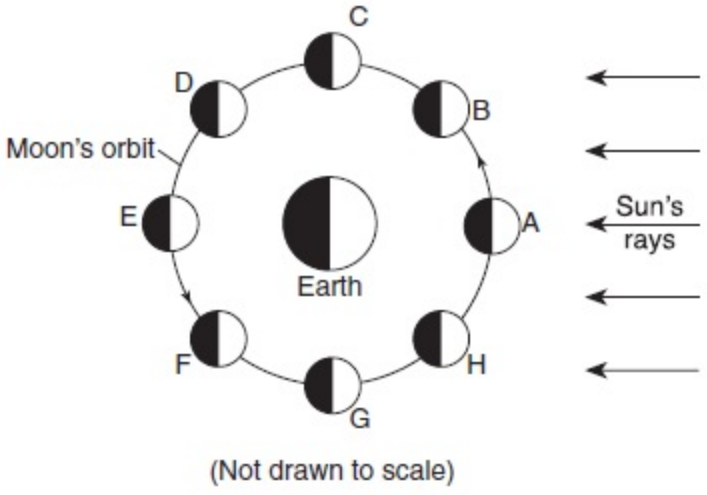
31. The diagram below represents Earth in space on the first day of a season.



Which season is beginning in New York State on the day represented in the diagram?

A) winter B) spring
C) summer D) fall

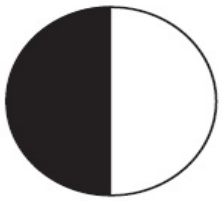
Base your answers to questions **32** and **33** on the diagram below and on your knowledge of Earth science. The diagram represents the Moon in eight positions, *A* through *H,* in its orbit around Earth.



32. Which Moon phase is observed in New York State when the Moon is located at position *F?*

A)

B)



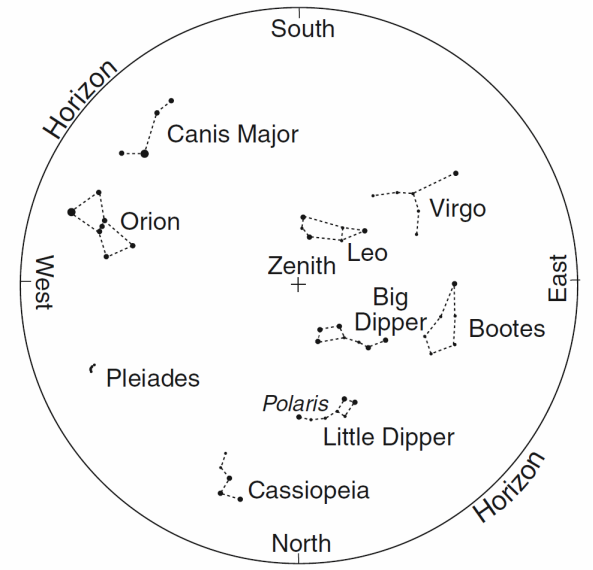
C)

D)

33. When a solar eclipse is viewed from Earth, the Moon must be located at orbital position

A) ***A*** B) *E* C) *C* D) *G*

34. Base your answer to the following question on the map of the night sky below, which represents the apparent locations of some of the constellations that are visible to an observer at approximately 40° N latitude at 9 p.m. in April. The point directly above the observer is labeled zenith.



Which motion causes the constellation Leo to no longer be visible to an observer at 40º N in October?

A) spin of the constellation on its axis
B) revolution of the constellation around the Sun
C) spin of Earth on its axis
D) revolution of Earth around the Sun

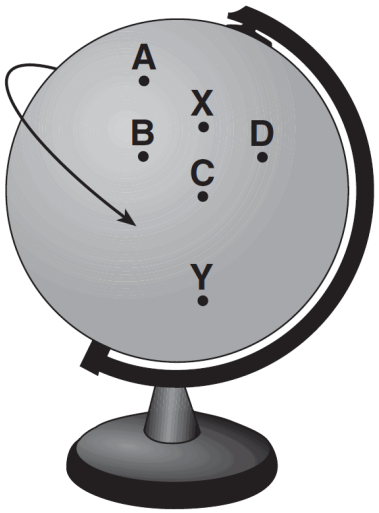
35. How many degrees does the Sun appear to move across the sky in four hours?

A) 60° B) 45° C) 15° D) 4°

36. The best evidence of Earth's rotation is provided by the

A) shape of Earth's orbit
B) shape of the Milky Way galaxy
C) changes in the total yearly duration of insolation at a location on Earth
D) apparent changes in the direction of swing of a Foucault pendulum

37. The diagram below represents a globe that is spinning to represent Earth rotating. The globe is spinning in the direction indicated by the arrow. Points *A, B, C, D, X,* and *Y* are locations on the globe.



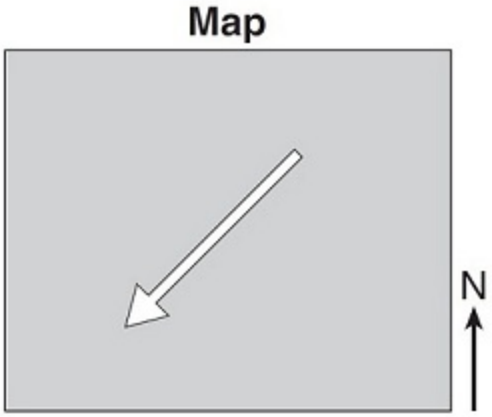
A student attempted to draw a straight line from point *X* to point *Y* on the spinning globe. Due to the Coriolis effect, the student's drawn line most likely passed through point

A) *A* **B) *B*** C) *C* D) *D*

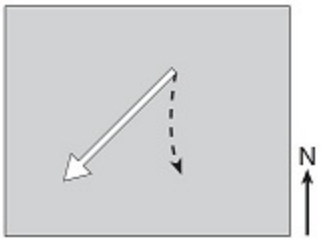
38. Which motion causes the Coriolis effect on Earth?

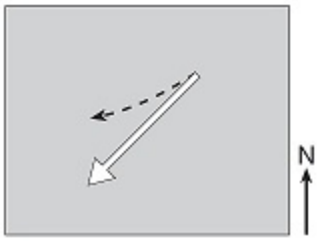
A) revolution of Earth around the Sun
B) revolution of the Moon around Earth
C) rotation of Earth on its axis
D) rotation of the Moon on its axis

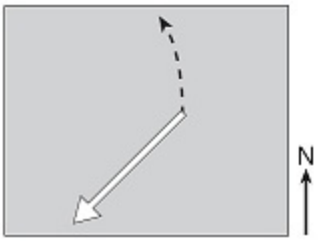
39. The arrow on the map below represents the direction a wind is blowing over a land surface in the Northern Hemisphere *without* showing the Coriolis effect.

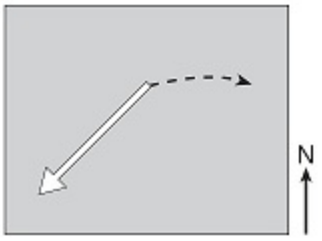


Which dashed arrow represents how the wind direction will change in the Northern Hemisphere due to the Coriolis effect?

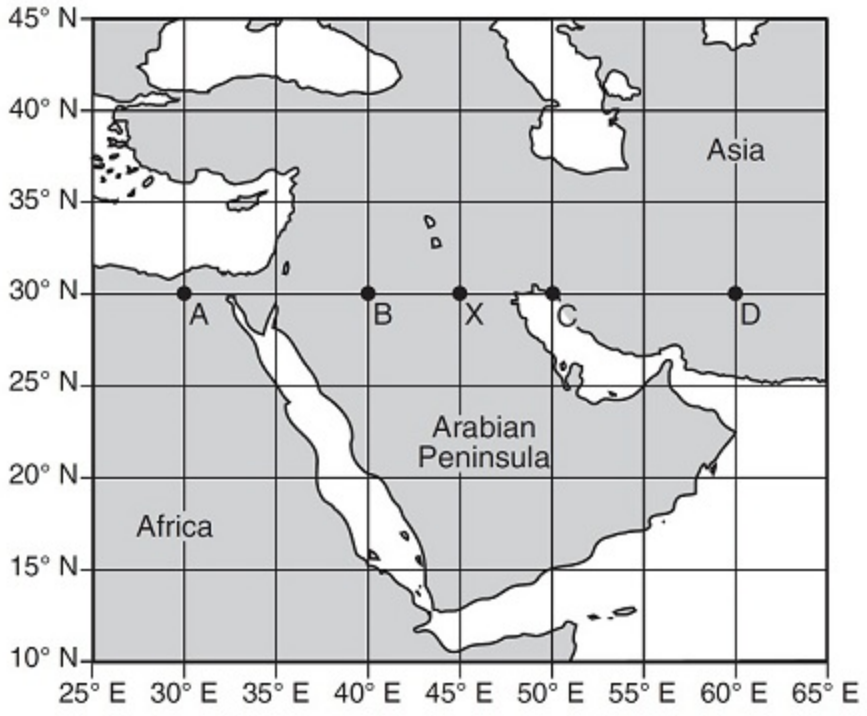
A) 

B) 

C) 

D) 

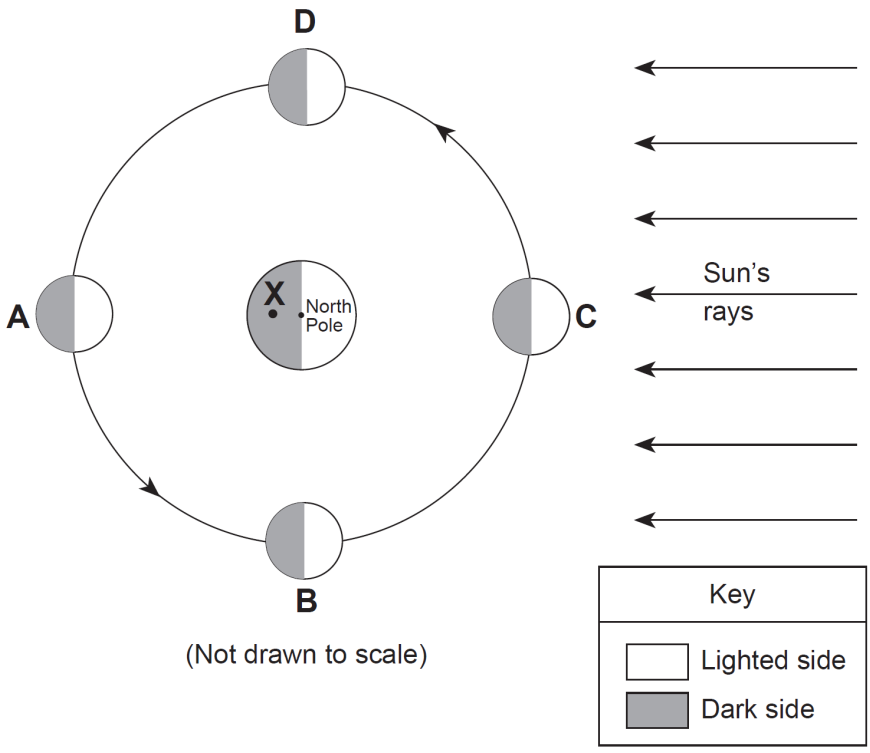
40. The map below shows a portion of the Middle East. Points *A, B, C*, *D*, and *X* are locations on Earth's surface.



When it is 10:00 a.m. solar time at location *X*, at which location is 11:00 a.m. solar time being observed?

A) *A* B) *B* C) *C* **D) *D***

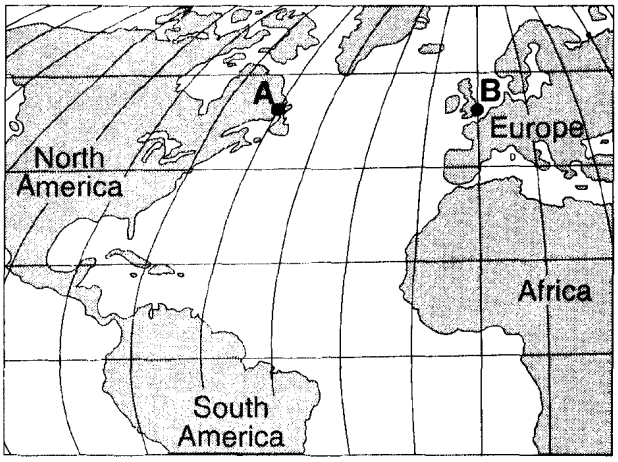
41. Base your answer to the following question on the diagram below, which shows Earth and the Moon in relation to the Sun. Positions *A*, *B*, *C*, and *D* show the Moon at specific locations in its orbit. Point *X* is a location on Earth's surface.



What is the time of day at point *X*?

A) 6 a.m. B) noon C) 6 p.m. **D) midnight**

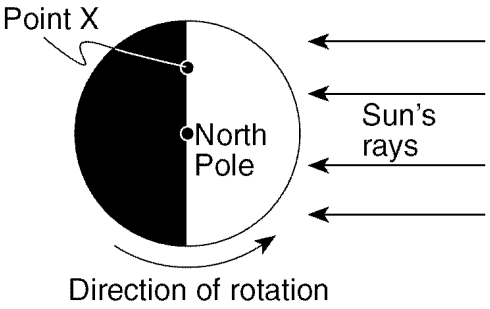
42. Base your answer to the following question on the map below, which shows locations *A* and *B* on Earth's surface at the same distance from the ocean, at the same elevation above sea level, and at the same latitude.



There is a four-hour solar time difference between locations *A* and *B*. What is the difference in longitude between locations *A* and *B*?

A) 15° B) 23.5° C) 45° **D) 60°**

43. The diagram below represents the direction of Earth's rotation as it appears from above the North Pole. Point *X* is a location on Earth's surface.



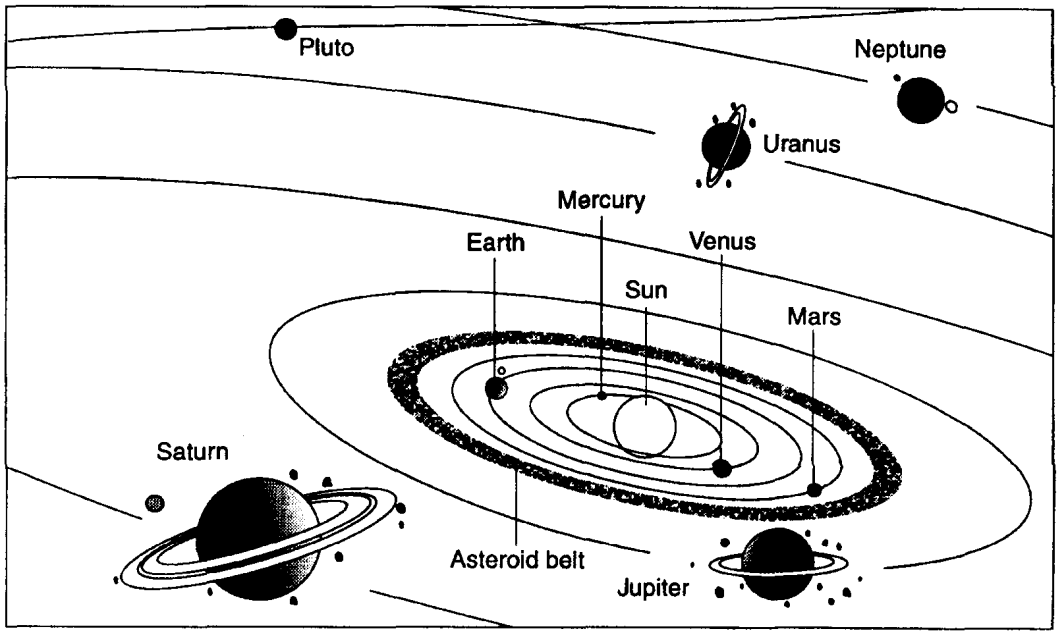
The time at point *X* is closest to

A) 6 a.m. B) 12 noon
C) 6 p.m. D) 12 midnight

44. In which type of model are the Sun, other stars, and the Moon in orbit around the Earth?

A) heliocentric model B) tetrahedral model
C) concentric model **D) geocentric model**

45. Base your answer to the following question on the diagram of the solar system below.

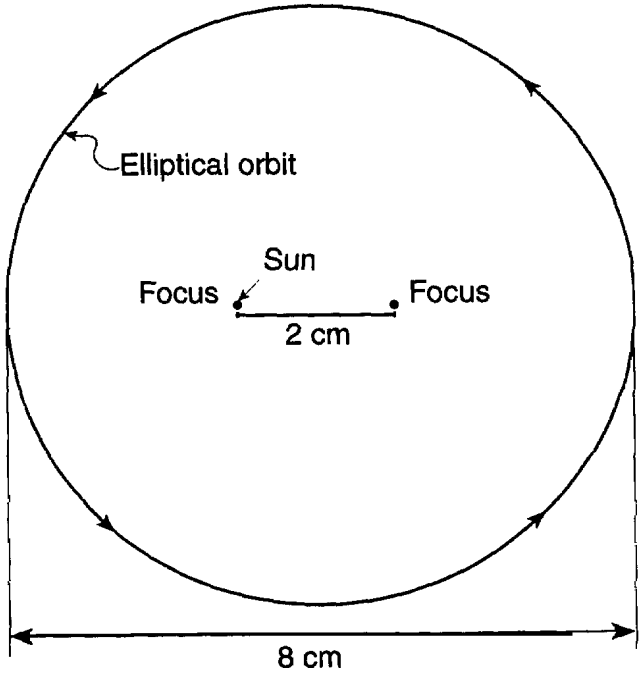


(Not drawn to scale)

Which kind of model of the solar system is represented by the diagram?

A) heliocentric model B) geocentric model
C) sidereal model D) lunar model

46. The constructed ellipse below is a true scale model of the orbit of a planet in our solar system. This ellipse best represents the orbit of the planet

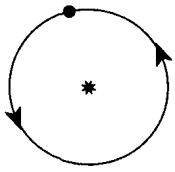


A) Neptune B) Jupiter
C) Pluto D) Mars

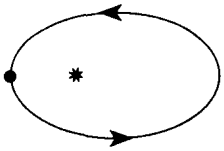
47. Which diagram shows a planet with the *least* eccentric orbit?

(Key: • = planet * = star)

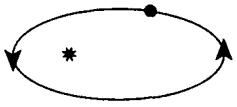
A)



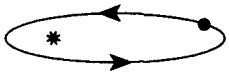
B)



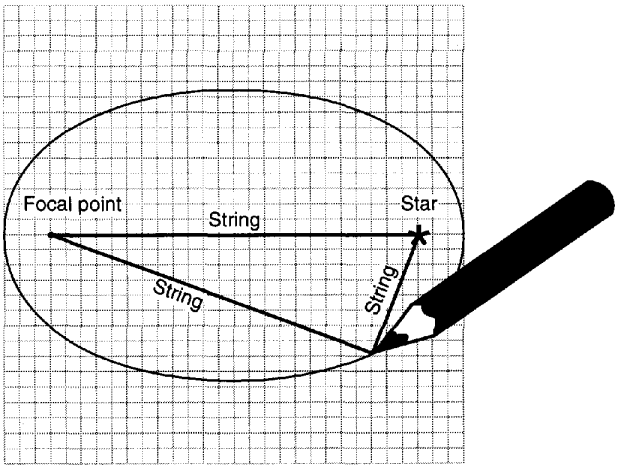
C)



D)



48. The diagram below represents the construction of a model of an elliptical orbit of a planet traveling around a star.
The focal point and the center of the star represent the foci of the orbit.



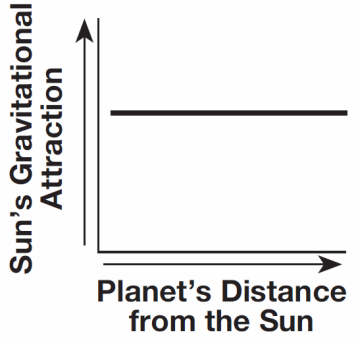
(Drawn to scale)

The eccentricity of this orbit is approximately

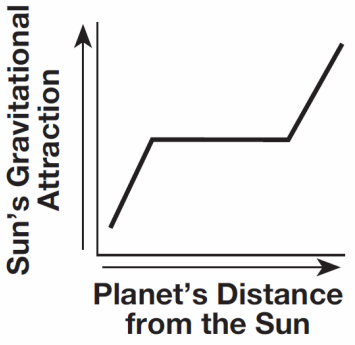
A) 1.3 **B) 0.8** C) 0.5 D) 0.3

49. Which graph best shows the general relationship between a planet's distance from the Sun and the Sun's gravitational attraction to the planet?

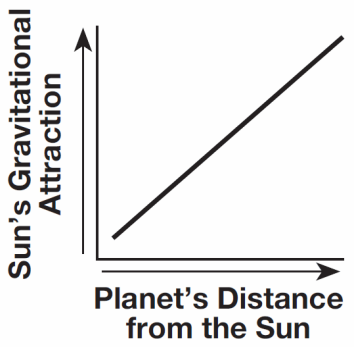
A)



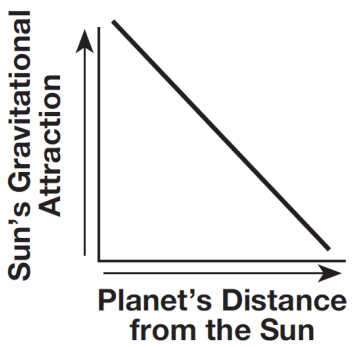
B)



C)



D)

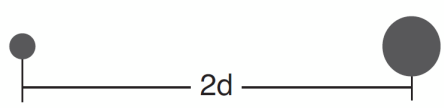


50. The symbols below represent star masses and distances.

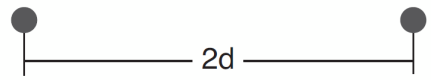
●	represents a star with a mass the same as the Sun's mass
⬤	represents a star with a mass greater than the Sun's mass
d	represents a certain distance between star centers
2d	represents twice the distance between star centers

Which diagram shows two stars that have the greatest gravitational force between them?

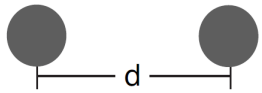
A)



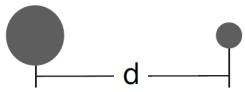
B)



C)



D)



51. Compared to the terrestrial planets, the Jovian planets are

A) larger and less dense
B) smaller and more dense
C) closer to the Sun and less rocky
D) farther from the Sun and more rocky

52. Which two characteristics do all Jovian planets have in common?

A) small diameters and low densities
B) small diameters and high densities
C) large diameters and low densities
D) large diameters and high densities

53. Base your answer to the following question on the diagrams below. The diagrams represent the events that occur when a large meteor, such as the one believed to have caused the extinction of many organisms, impacts Earth's surface. Diagram *A* shows the meteor just before impact. Diagram *B* represents the crater forming, along with the vapor and ejecta (the fragmented rock and dust) thrown into the atmosphere.

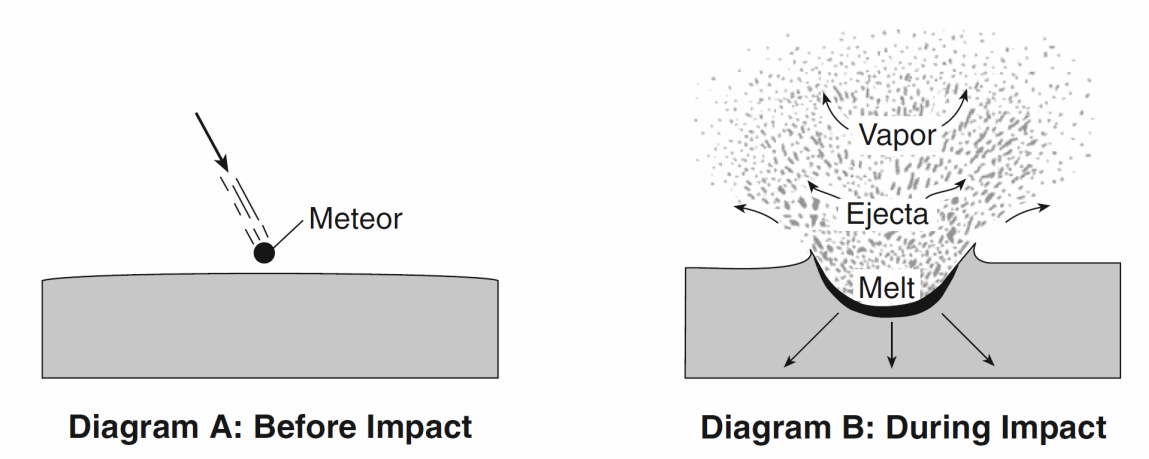
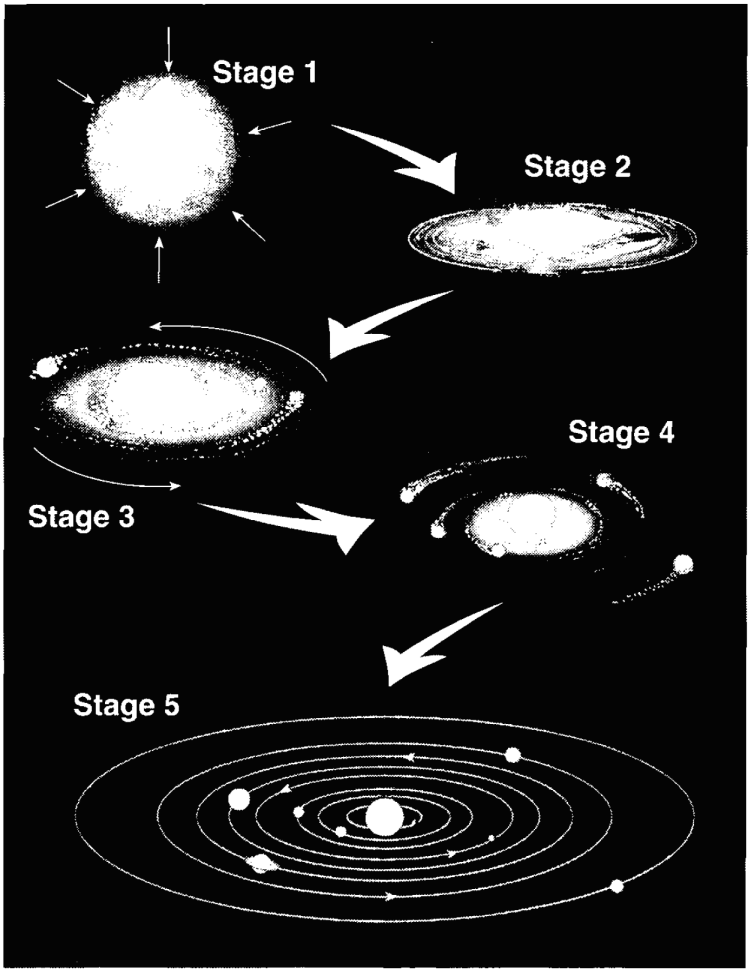


Diagram A: Before Impact **Diagram B: During Impact**

Many meteors are believed to be fragments of celestial objects normally found between the orbits of Mars and Jupiter. These objects are classified as

A) stars **B) asteroids** C) planets D) moons

54. Base your answer to the following question on the diagram below. The diagram represents the inferred stages in the formation of our solar system. Stage 1 shows a contracting gas cloud. The remaining stages show the gas cloud flattening into a spinning disk as planets formed around our Sun.



(Not drawn to scale)

Which force was mostly responsible for the contraction of the gas cloud?

A) friction **B) gravity** C) magnetism D) inertia

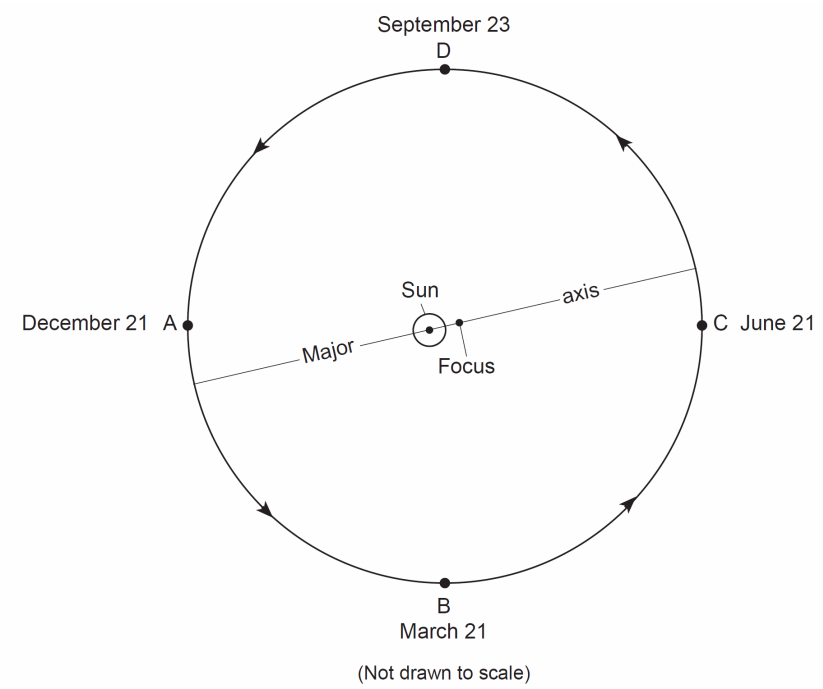
55. What is the inferred age of our solar system, in millions of years?

A) 544 B) 1300
C) 4600 D) 10,000

56. Most of a Earth's atmosphere comes from

A) the gas surrounding Earth at the time of its formation
B) gas released from the interior of our planet
C) gas captured as Earth passed through a gas cloud
D) escaped gas from the sun

57. Base your answer to the following question on the diagram below and on your knowledge of Earth science. The diagram represents Earth's revolution around the Sun. Points *A, B,* C, and D represent Earth's positions in its orbit on the first day of each of the four seasons. The major axis and the foci (the center of the Sun and the other focus) of Earth's orbit are shown.



Approximately how many days (d) does it take Earth to travel from position *A* to position C?

A) 91 d **B) 182 d** C) 274 d D) 365 d

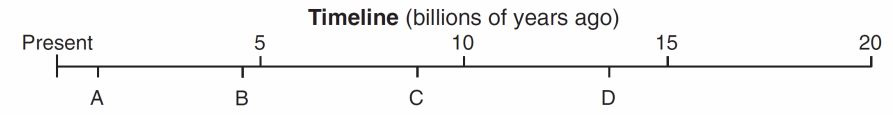
58. Which terms describe the motion of most objects in our solar system?

A) noncyclic and unpredictable
B) noncyclic and predictable
C) cyclic and unpredictable
D) cyclic and predictable

61. Which evidence best supports the theory that the universe began with a massive explosion?

A) cosmic background radiation in space
B) parallelism of planetary axes
C) radioactive dating of Earth's bedrock
D) life cycle of stars

59. The timeline below represents time from the present to 20 billion years ago. Letters *A, B, C,* and *D* represent specific times.



Which letter on the timeline best represents the time when scientists estimate that the Big Bang occurred?

A) *A* B) *B* C) *C* **D) *D***

60. A red shift in the light from very distant galaxies suggests that the universe is

A) fixed and stationary B) moving randomly
C) contracting **D) expanding**

62. In which sequence are the items listed from least total mass to greatest total mass?

A) solar system, Milky Way, universe
B) Milky Way, solar system, universe
C) universe, Milky Way, solar system
D) Milky Way, universe, solar system

63. A blue shift of the light from a star indicates that the star

A) will soon become a main sequence star
B) will soon become a giant star
C) is moving closer to Earth
D) is moving away from Earth

64. The theory that the universe is expanding is supported by the

A) blue shift of light from distant galaxies
B) red shift of light from distant galaxies
C) nuclear fusion occurring in the Sun
D) radioactive decay occurring in the Sun

65. The major evidence supporting the "Big Bang" theory is

A) observations of supernova explosions.
B) the discovery of black holes.
C) observations that the Doppler red shift becomes greater as we look at more distant galaxies.
D) observations that most galaxies are rotating

66. Which star is more massive than our Sun, but has a lower surface temperature?

A) *40 Eridani B*
B) *Sirius*
C) *Aldebaran*
D) *Barnard's Star*

67. Light and other forms of electromagnetic radiation are given off by stars using energy released during

A) nuclear fusion
B) conduction
C) convection
D) radioactive decay

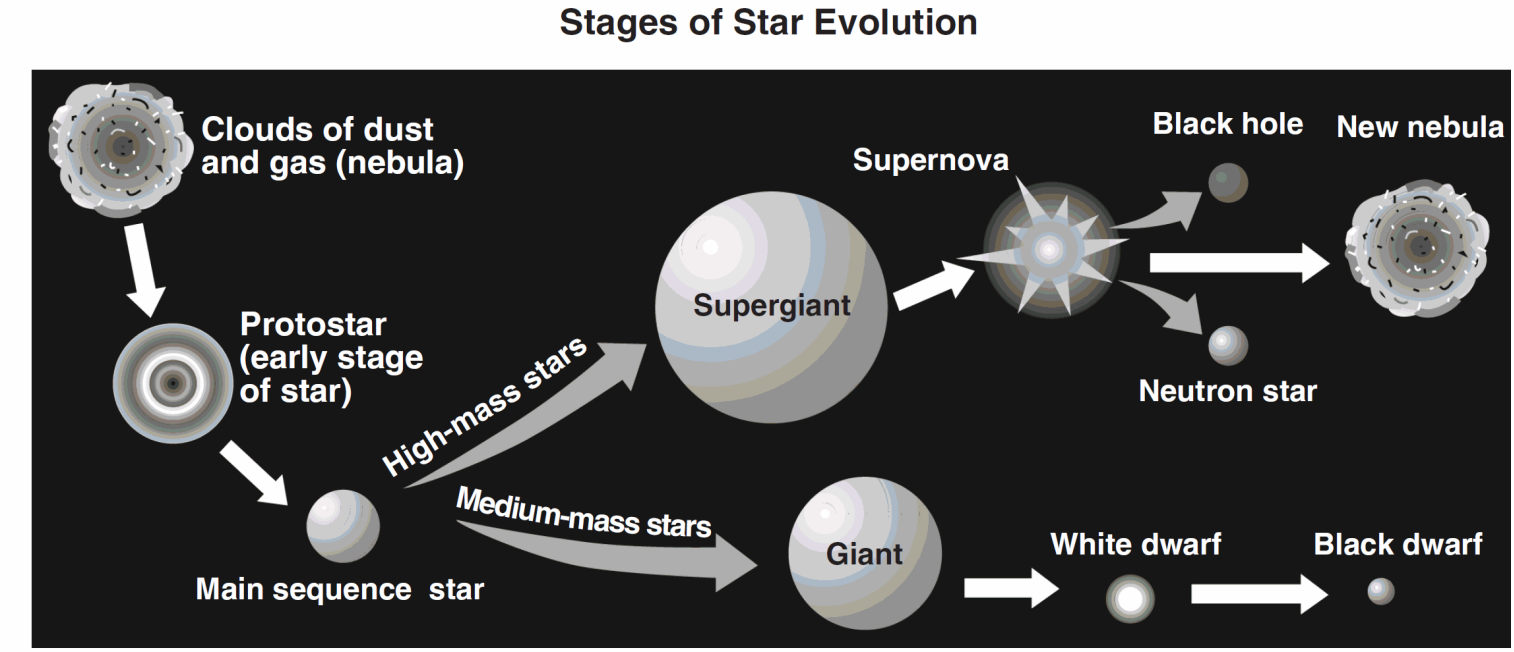
68. Which two stars are most similar in luminosity?

A) *Betelgeuse* and *Barnard's Star*
B) *Procyon B* and *Proxima Centauri*
C) *Polaris* and the Sun
D) *Alpha Centauri* and *Sirius*

69. Which list shows stars in order of increasing temperature?

A) *Barnard's Star*, *Polaris*, *Sirius*, *Rigel*
B) *Aldebaran*, the *Sun*, *Rigel*, *Procyon B*
C) *Rigel*, *Polaris*, *Aldebaran*, *Barnard's Star*
D) *Procyon B*, *Alpha Centauri*, *Polaris*, *Betelgeuse*

70. Base your answer to the following question on the diagram below and on your knowledge of Earth science. The diagram represents two possible sequences in the evolution of stars.



(Not drawn to scale)

Which property primarily determines whether a giant star or a supergiant star will form?

A) mass B) color C) shape D) composition

71. Which process is responsible for the greatest loss of energy from Earth's surface into space on a clear night?

A) condensation B) conduction
C) radiation D) convection

72. Which type of land surface will most likely absorb the greatest amount of incoming solar radiation?

A) rough, dark-colored surface
B) rough, light-colored surface
C) smooth, dark-colored surface
D) smooth, light-colored surface

73. Which type of electromagnetic radiation has the longest wavelength?

A) ultraviolet B) gamma rays
C) visible light **D) radio waves**

74. Which color of the visible light has the *shortest* wavelength?

A) violet B) green
C) yellow D) red

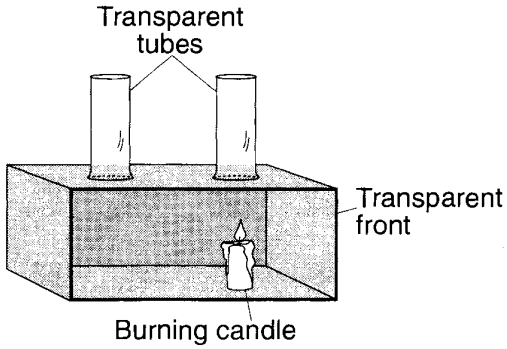
75. When water vapor condenses, how much heat energy will be released into the atmosphere?

A) 2260 joules/gram B) 334 joules/gram
C) 4.18 joules/gram D) 2.11 joules/gram

76. What is the primary method of heat transfer through solid rock during contact metamorphism?

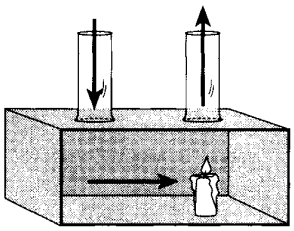
A) advection B) convection
C) absorption **D) conduction**

77. The diagram below shows a laboratory box used to demonstrate the process of convection in the atmosphere.

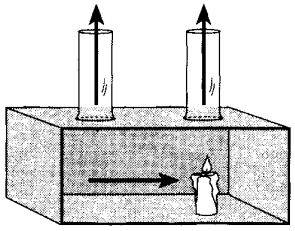


Which diagram has arrows that show the direction of airflow that occurs when the candle is burning?

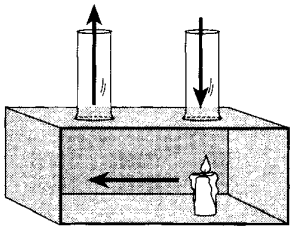
A)



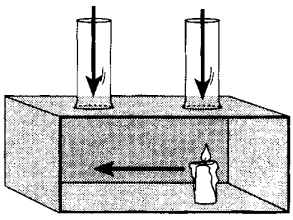
B)



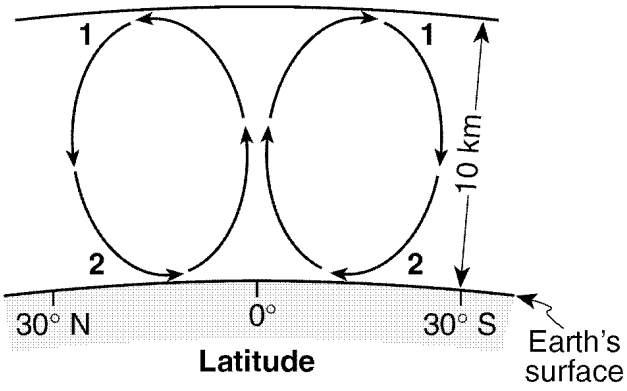
C)



D)



78. Base your answer to the following question on the cross section below and on your knowledge of Earth science. The cross section shows the general movement of air within a portion of Earth's atmosphere located between 30° N and 30° S latitude. Numbers 1 and 2 represent different locations in the atmosphere.



(Not drawn to scale)

The air movement shown in the cross section is due to the process of

A) condensation B) conduction C) evaporation **D) convection**

79. By which process does starlight travel through space?

A) absorption B) conduction
C) convection **D) radiation**

80. What best explains why, in early spring, ice remains longer on Lake Erie than on the surrounding land areas when the air temperature is above freezing?

A) Water has a higher specific heat than land.
B) Energy is needed for water to evaporate.
C) Cool winds from the surrounding land cool the ice on the lake.
D) Air temperature does not affect water temperature.

81. What is the heat energy required to change 2 grams of liquid water at 100ºC to water vapor at 100ºC?

A) 334 J B) 668 J
C) 2260 J **D) 4520 J**

82. How much heat energy will be lost by a 2.0-gram mass of water as it cools from 40ºC to 35ºC?

A) 10 J B) 8.36 J
C) 41.2 J D) 80 J

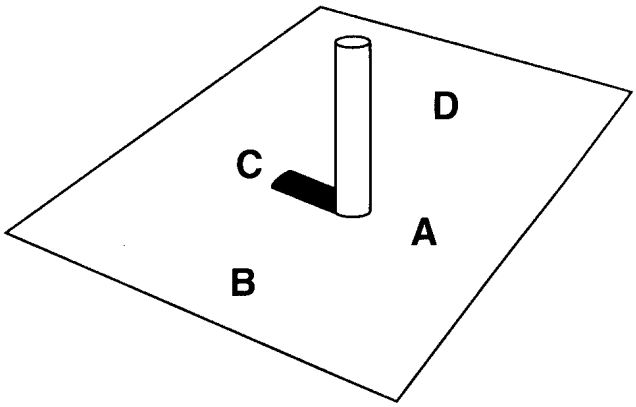
83. On which day of the year would the intensity of insolation at Kingston, New York, most likely be greatest?

A) March 21 **B) June 21**
C) September 23 D) December 21

84. The coldest climates on Earth are located at or near the poles primarily because Earth's polar regions

A) receive mostly low-angle insolation
B) receive less total yearly hours of daylight
C) absorb the greatest amount of insolation
D) are usually farthest from the Sun

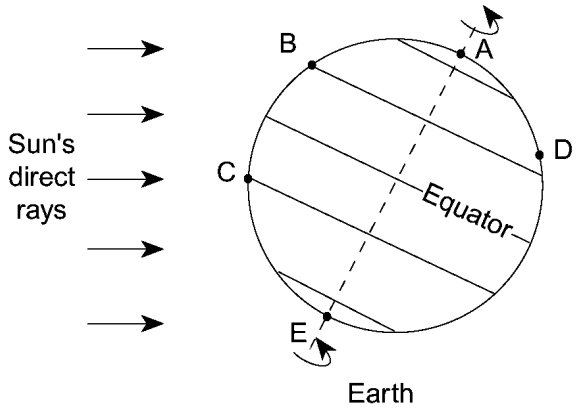
85. The diagram below shows the noontime shadow cast by a vertical post located in New York State.



Which letter indicates a location west of the post?

A) *A* **B) *B*** C) *C* D) *D*

86. Base your answer to the following question on the diagram below, which shows the tilt of Earth on its axis in relation to the Sun on one particular day. Points *A* through *E* are locations on Earth's surface. Point *D* is located in Virginia. The dashed line represents Earth's axis.

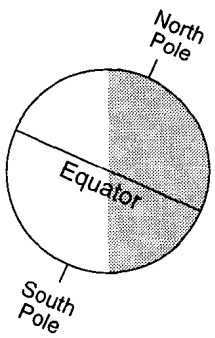


On this day, which location has the greatest number of hours of daylight?

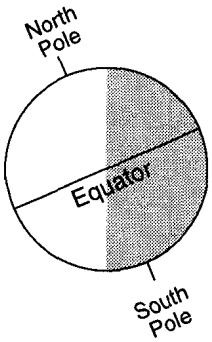
A) *E* B) *B* C) *C* D) *D*

87. The diagrams below represent Earth's tilt on its axis on four different dates. The shaded portion represents the nighttime side of Earth. Which diagram best represents the day on which the longest duration of insolation occurs in New York State?

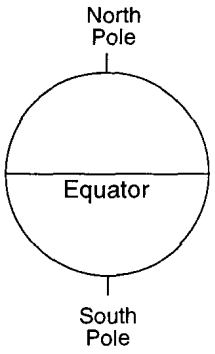
A)



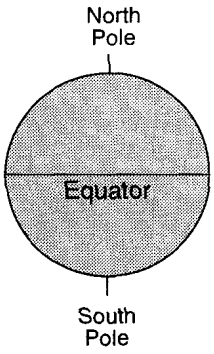
B)



C)



D)



88. The ozone layer helps life on Earth because ozone

A) modifies the normal El Niño weather pattern
B) reflects insolation from the Sun
C) absorbs damaging ultraviolet radiation from the Sun
D) deflects winds from a straight line to a curved path

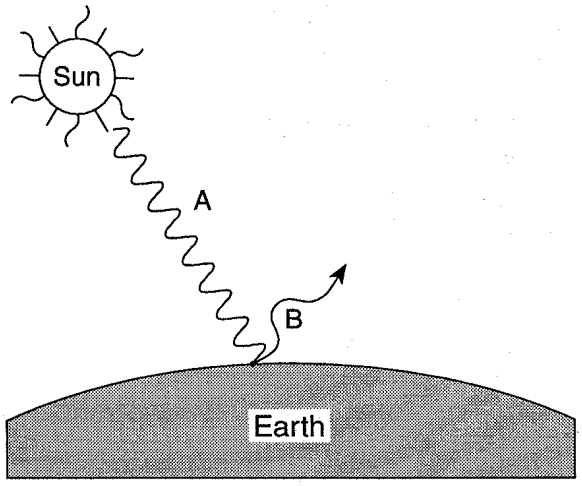
89. Compared to a light-colored rock with a smooth surface, a dark-colored rock with a rough surface will

A) both absorb and reflect less insolation
B) both absorb and reflect more insolation
C) absorb less insolation and reflect more insolation
D) absorb more insolation and reflect less insolation

90. Compared to dull and rough rock surfaces, shiny and smooth rock surfaces are most likely to cause sunlight to be

A) reflected B) refracted
C) scattered D) absorbed

91. The diagram below represents energy being absorbed and reradiated by the Earth.



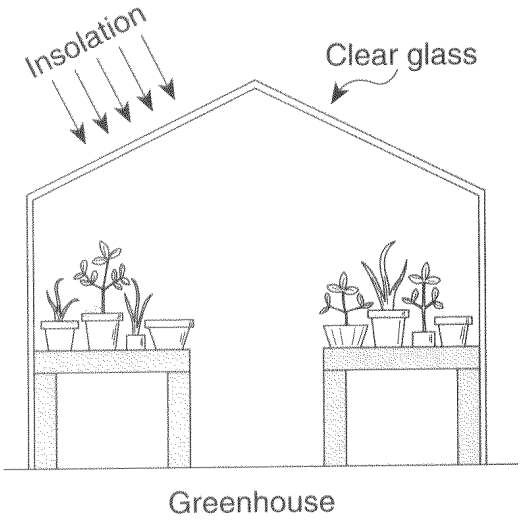
Which type of energy is represented by the radiation at *B*?

A) insolation
B) visible light
C) ultraviolet rays
D) infrared energy

92. Which color is the best radiator of electromagnetic energy?

A) red
B) white
C) black
D) yellow

93. The diagram below shows a greenhouse.



What is the primary function of the clear glass of the greenhouse?

A) The glass reduces the amount of insolation entering the greenhouse.
B) The glass allows all wavelengths of radiation to enter and all wavelengths of radiation to escape.
C) The glass allows short wavelengths of radiation to enter, but reduces the amount of longwavelength radiation that escapes.
D) The glass allows long wavelengths of radiation to enter, but reduces the amount of shortwavelength radiation that escapes.

Answer Key
Midterm Practice

1.	**D**	37.	**B**	73.	**D**
2.	**D**	38.	**C**	74.	**A**
3.	**D**	39.	**B**	75.	**A**
4.	**C**	40.	**D**	76.	**D**
5.	**B**	41.	**D**	77.	**A**
6.	**C**	42.	**D**	78.	**D**
7.	**A**	43.	**C**	79.	**D**
8.	**D**	44.	**D**	80.	**A**
9.	**B**	45.	**A**	81.	**D**
10.	**B**	46.	**C**	82.	**C**
11.	**B**	47.	**A**	83.	**B**
12.	**B**	48.	**B**	84.	**A**
13.	**A**	49.	**D**	85.	**B**
14.	**C**	50.	**C**	86.	**A**
15.	**D**	51.	**A**	87.	**B**
16.	**B**	52.	**C**	88.	**C**
17.	**B**	53.	**B**	89.	**D**
18.	**D**	54.	**B**	90.	**A**
19.	**B**	55.	**C**	91.	**D**
20.	**D**	56.	**B**	92.	**C**
21.	**B**	57.	**B**	93.	**C**
22.	**C**	58.	**D**		
23.	**A**	59.	**D**		
24.	**D**	60.	**D**		
25.	**C**	61.	**A**		
26.	**B**	62.	**A**		
27.	**A**	63.	**C**		
28.	**C**	64.	**B**		
29.	**C**	65.	**C**		
30.	**C**	66.	**C**		
31.	**A**	67.	**A**		
32.	**A**	68.	**B**		
33.	**A**	69.	**A**		
34.	**D**	70.	**A**		
35.	**A**	71.	**C**		
36.	**D**	72.	**A**		