

8th Grade Science 2014 STAAR Pretest 2: Topics 7-12

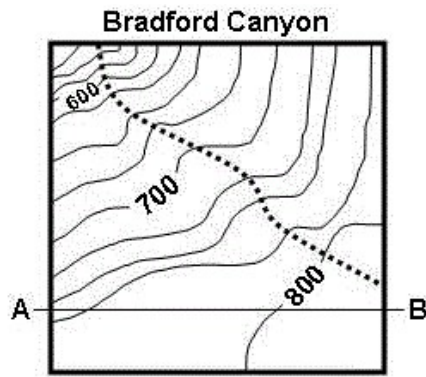
Some questions (c) 2012 by Region 10 Educational Service Center.

8th Grade Science Fall Semester Exam Practice Test

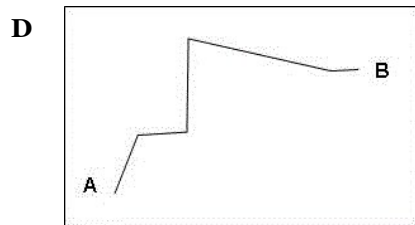
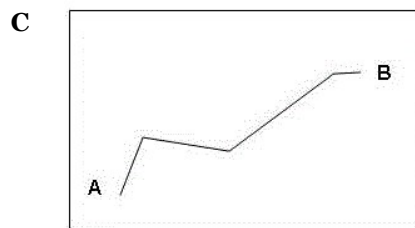
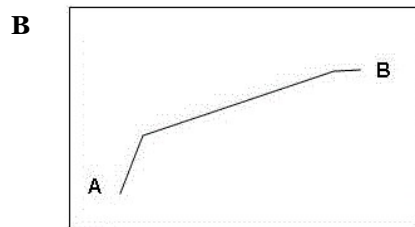
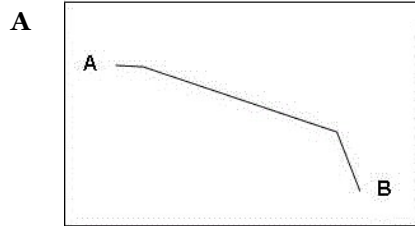
- 1** Ocean currents move warm and cold water throughout the oceans, affecting weather systems and climates. Where do warm ocean currents originate?
- A** near the poles
 - B** near the equator
 - C** near continents
 - D** near the middle of oceans
- 2** The term “jet stream” is often used by weather forecasters to describe—
- F** the cloud-like condensation trails that are sometimes seen behind jet aircraft
 - G** warm pacific winds associated with volcanic activity in the western pacific which carry heat to the north pole
 - H** solar winds that bring high energy particles to the upper atmosphere, providing heat which sets off convection cycles disturbing weather in the tropical latitudes
 - J** the west to east winds that circle the globe, often just below the poles in latitude and just beneath the stratosphere in elevation

CLASS COPY - DO NOT WRITE ON TEST - CLASS COPY - DO NOT WRITE ON TEST

3

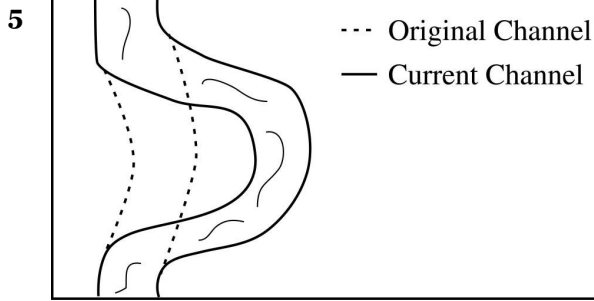


Which profile best represents the contour map along line AB?



4 Mountains in the Himalayans are increasing in elevation due to —

- F seafloor spreading
- G the action of earthquakes
- H colliding tectonic plates
- J transform faulting of a tectonic plate



The figure shows the original channel of a river, as well as its current channel.

Which of the following forces MOST LIKELY changed the course of the river?

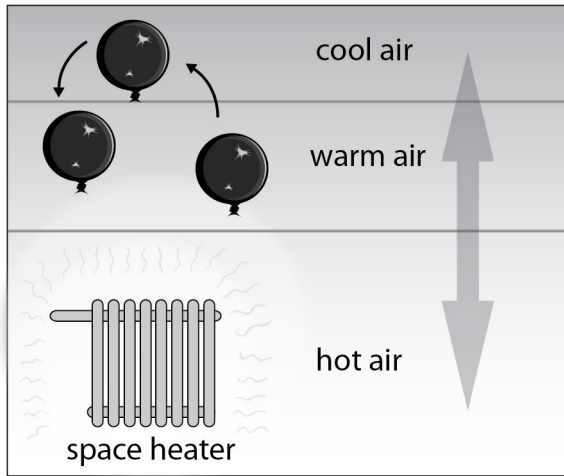
- A glaciation and eruption
 - B deposition and erosion
 - C lava flow and weathering
 - D crustal uplift and compression
- 6 A convergent boundary is formed when two tectonic plates meet and push against each other. What type of land form would occur at this type of boundary?
- F canyon
 - G coastline
 - H mountain
 - J plains
- 7 Which statement is the best evidence for the conclusion that faults and volcanoes are results of the movement of tectonic plates?
- A Volcanoes are most often located in the middle of tectonic plates
 - B New volcanoes are located near inactive plate boundaries
 - C Faults and volcanoes existed before there were any tectonic plates
 - D Faults and volcanoes are often found at tectonic plate boundaries

- 8 Scientists theorize that the continents move across the surface of the Earth on plates. The places where these plates meet are often the sites of geological events such as volcanoes, earthquakes, and mountain ranges. In the Atlantic Ocean, an underwater mountain range known as the Mid-Atlantic Ridge has formed at the boundary between two plates. Hot magma breaks through the top of the ridge and hardens to form oceanic crust. In the Pacific Ocean, a boundary between two plates has created a trench. Oceanic crust slips into this trench and melts back into the Earth.

Some scientists theorize that Earth's crust is formed at ocean ridges and recycled within the Earth at ocean trenches. Which of the following is the BEST supporting evidence for this theory?

- F Volcanoes form inland when the trench occurs close to a continent.
- G Mountains form along ridges, but do not form along trenches.
- H Rocks along ridges are young, while rocks along trenches are old.
- J Earthquakes occur deeper in the Earth at trenches than at ridges.

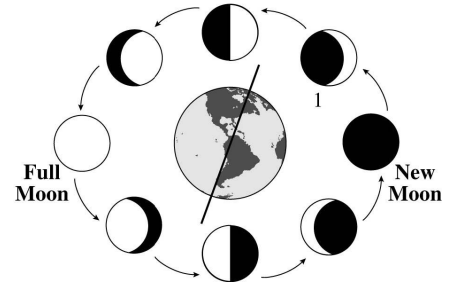
- 9 Mrs. Fields showed a video to her class. In the video, a balloon was warmed in front of a small heater. When the warmed balloon was released it floated toward the cooler ceiling, then it slowly drifted back down where it was warmed, rose up, and drifted down again.



This model represents which of the following concepts?

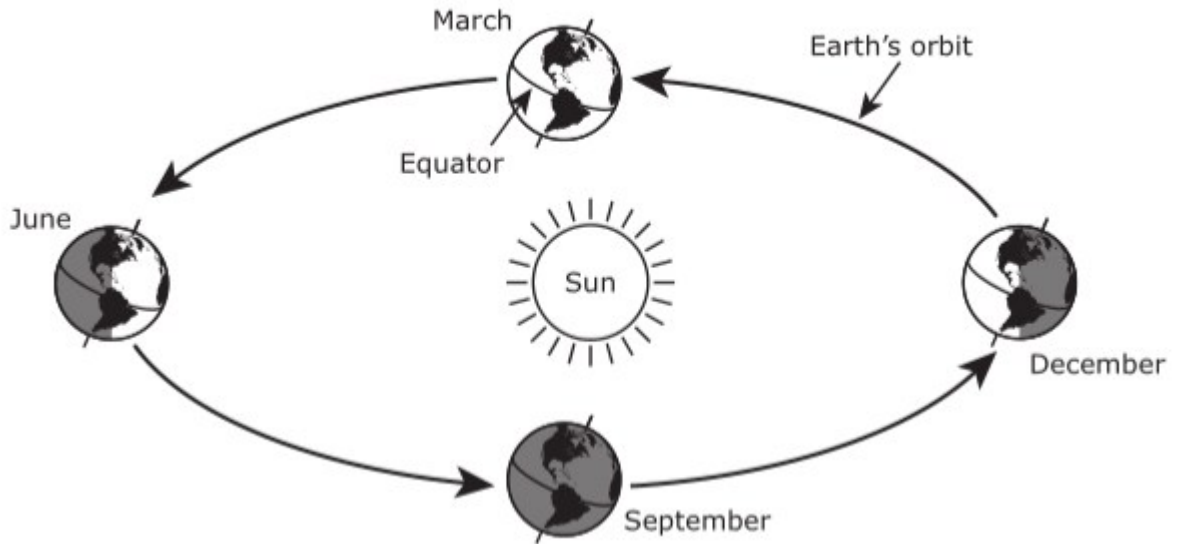
- A thermocline
 - B convection
 - C thermoregulation
 - D conduction
- 10 The Earth moves in predictable patterns. One of these patterns causes the seasons as the Earth moves around the Sun along its elliptical orbit. This movement is referred to as —
- F a rotation
 - G an equinox
 - H a photoperiod
 - J a revolution

11



What is the phase of the moon indicated by the 1 in the diagram shown above?

- A waning crescent phase
 - B waning gibbous phase
 - C waxing crescent phase
 - D waxing gibbous phase
- 12 Mrs. Gupta is the Cub Scout den mother. She is taking a troop of boys on a camp out and believes it will be easier if she schedules the outing to happen during the full moon. Last night she observed a waning gibbous moon. Approximately how many days will she have to wait before the next full moon?
- F 7
 - G 14
 - H 21
 - J 28

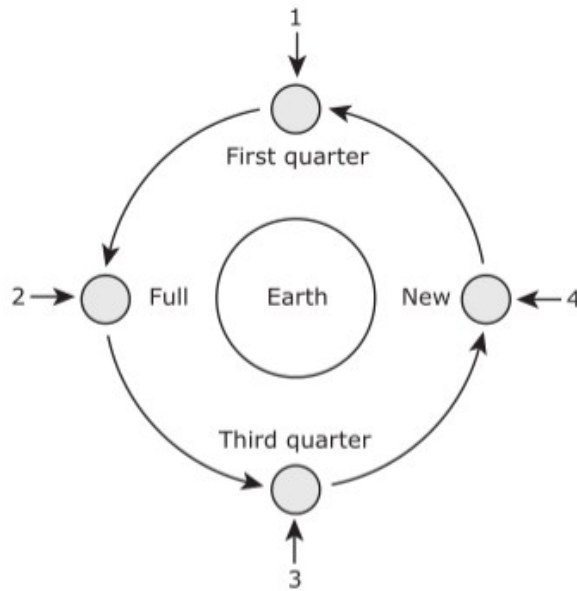


Earth would not have seasons if it —

- A no longer tilted on its axis
- B stopped rotating on its axis
- C took an additional month to orbit the sun
- D revolved around the sun in the opposite direction

-
- 14 Which statement below best explains why we can only see one side of the moon from the Earth?
- F The rotational period and the revolutionary period are the same length.
 - G The axis of the Earth prevents us from seeing the other side of the moon.
 - H People in the Northern Hemisphere see one side of the moon while people in the Southern Hemisphere see the other side.
 - J The other side of the moon is visible during the new moon phase.

- 15 The diagram below shows four phases of the moon as it revolves around Earth.



A student builds a model based on this diagram. The student uses foam balls to represent the moon and Earth and a flashlight to represent the sun. The student should shine the flashlight on the model of Earth from Position—

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

- 16 Nearby stellar neighbors include the Alpha Centauri group and the Sirius star systems. Whereas light from our sun takes a little over 8 minutes to reach the Earth, light from these stars can get to Earth in—

- F seconds
- G hours
- H years
- J centuries

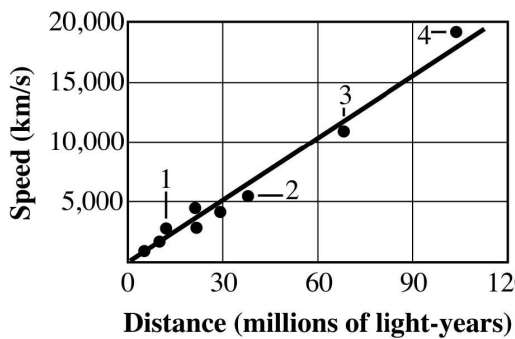
- 17 Which of the following would BEST support the theory that the universe undergoes cycles of expansion and contraction that last billions of years?

- A finding another planet in the solar system that is similar to Earth
- B discovering life-forms on another planet
- C observing blue- or redshifted light from stars
- D calculating the age of the universe

- 18 Astronomers measure distances between stars in units of light years because the same distance written in kilometers –
- F is not as accurate
 - G cannot be used by a computer
 - H is a very large number
 - J cannot be used to compare long distances

- 19 Which of the following BEST supports the Big Bang theory of the origin of the universe?
- A the different shapes of galaxies
 - B the redshift of light from stars
 - C the regular motions of planets
 - D the constant speed of light

20 **Galaxy Speed vs. Distance**

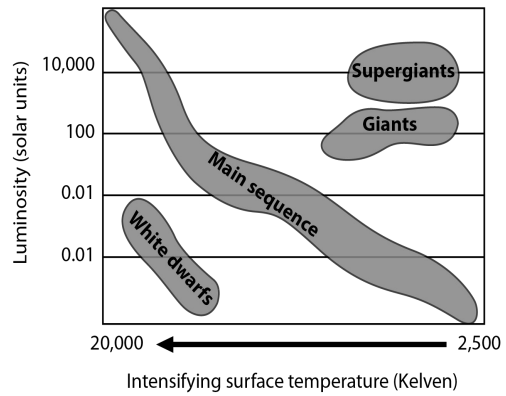


The graph above shows the relationship between the distance of galaxies from our galaxy and the speed at which those galaxies are moving. Which of the labeled galaxies is moving away from us at the fastest speed?

- F 1
- G 2
- H 3
- J 4

21

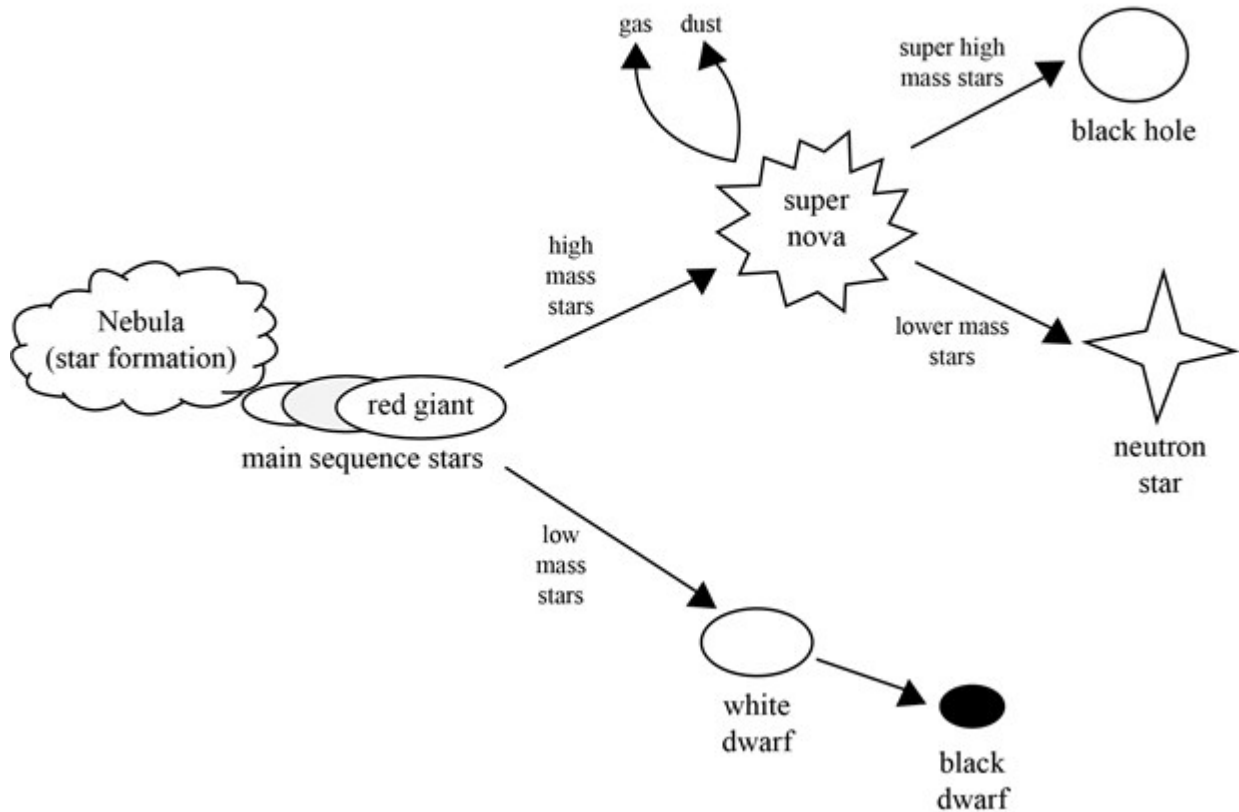
The Hertzsprung-Russell Diagram



According to the graph above, which stars are MOST likely to increase in brightness as they increase in temperature?

- A main sequence stars and red giants
- B red giants and super giants
- C super giants and white dwarfs
- D white dwarfs and main sequence stars

Life Cycle of Stars



In what way is the life cycle of stars a cycle?

- F** The number of stars in the universe is constant.
- G** All types of stars follow a predictable pattern of change.
- H** Super novae redistribute dust and gas which eventually form nebulae.
- J** Black holes cause the compression of matter which, in time, forms new stars.

23 Which of the following is the MOST likely negative effect of damming rivers to supply hydroelectric energy?

- A** increased fossil fuel costs
- B** loss of fish habitat
- C** decreased use of electricity
- D** higher levels of air pollution

24 Which relationship is most like athlete's foot fungus and humans?

- F** nitrogen-fixing bacteria and clover
- G** dogs and ticks
- H** hummingbirds and red flowers
- J** antelope and mountain lion

25 Coyotes are wild animals related to dogs. Their diet usually consists of fruit and small rodents, such as rats, and mice, but in large cities they have been known to attack pets. In the wild wolves, cougars and bears compete with the coyotes keeping them from overpopulating. However, in the past five years, more and more coyotes have been spotted in Denver, Dallas, Chicago, Detroit, New York and other large cities.

Why do you think the numbers of coyotes keep increasing in the city?

- A** Coyotes don't have as much competition in the city as they do in the wild.
- B** It is easier for coyotes to find shelter during cold weather in the city.
- C** Coyotes are running out of food in the wild.
- D** It is easy for coyotes to adapt to a city habitat.