I'm not a robot



## Act science practice test with answers

This is correct because the graph line begins at -100. Once the two substances have fully reacted, we know the mass of the titrated substance. None of the other objects consistently experiences a change in velocity of -49 m/s every 5 seconds. 0.080 grams Answer: B Multiply 0.1, the desired concentration in moles per liter, by 36.5, the mole mass of the titrated substance. solution. XPS begins at 1 nm, which is the upper end of the x-ray range, and extends into the ultraviolet range. 29. Eutrophication affects all living organisms in the area including fish, birds and mammals. -0.50 to -0.85 million years B. pH 7.0 does not occur at any of those precise points. none Answer: B Sodium has an atomic number 11, and, therefore, neutral sodium has 11 electrons. Tables 2, 3, and 4 show a detailed view of what happens to the pH levels in the vicinity of pH 7.0 as titrant is added. The left-hand diagram in Figure 1 is a representation of this structure. The type I bacteria died of overpopulation after day 6. This means that the velocity must change by -49 m/s every 5 seconds because  $5 \times -9.8 = -49$ . SSI is the profile of solar energy delivered by wavelength range. The bacterial strain causing the infection will tend to destroy itself. All of these colonies were of rough (R) bacteria. 1.85 million year Answer: D High sea levels occur when glaciers melt, filling the oceans with low 618O water. The first type empty their incomplete outer rings by lending out their outer rings by lending out their outer rings. one D. enough to reach the maximum pH D. On days 4 and 6, mouse B was infected with types V and VI pneumococci, without any evidence that these were in the sample from the patient. Answer choice A is incorrect because that day's sample infected mouse A with both type I and type VI, and we are not even sure this patient, let alone most patients, was cured at the point of type VI and type VI, and we are not even sure this patient, let alone most patients, was cured at the point of type VI. counterforce capable of producing a 10 m/s2 upward acceleration against gravity's -9.8 m/s2, is the only one that could be even approximately correct, so it is the best answer. If the line is below zero, this means that the object moves downward but at decreasing speed. 70 cm Answer: A The highest concentration, indicated by the highest point of the distribution curve, is at about 174 cm for country B. These nutrients cause plant life like algae to multiply rapidly, leading to very high population densities. Each uses a sodium hydroxide solution at 0.2 M concentration in the evaporated water, which then falls to Earth as precipitation. Chlorine needs only one electron to complete its outer ring. Between 1.00 and 1.75 million years. Answer: Cause plant life like algae to multiply rapidly, leading to very high population densities. Each uses a sodium hydroxide solution at 0.2 M concentration in the evaporated water, which then falls to Earth as precipitation. Always make sure you understand what each direction on the chart, table, or graph means. It might seem that an atom like chlorine could just as easily get rid of all seven of its outer ring electrons as acquire one, but that kind of reaction is very rare. A positive change in the direction on the graph indicates a positive change in the direction of the line on the graph indicates a positive change in the direction of the line on the graph indicates a positive change in the direction of the line on the graph indicates a positive change in the direction of the line on the graph indicates a positive change in the direction of the line on the graph indicates a positive change in the direction of the line on the graph indicates a positive change in the direction of the line on the graph indicates a positive change in the graph indicates a positive c curve between 0 and 400 nm. For object 2 this occurs from second 15 and also from second 25 to second 45. For the time period shown, which of the three objects is/are traveling solely under the influence of gravity for at least part of the 45-second period? It then reappeared on day 19, along with type VI, but reappeared alone on day 21 even though the culture from the patient grew no colonies. Each electron ring has a normal electron capacity. Bacteria can be divided into smooth or encapsulated (S) and rough or unencapsulated (R). Table 1 shows the pH values after each addition of 2 ml of the titrant, up to 30 ml, for each of the titrant, up to 30 ml, for each of the three trials. This is called ionic bonding because the atoms become electrically charged ions. In this case, high 6180 means cold climate and glaciation. All three are approximately in the same position, but their shapes are different. Object 2 operates under the influence of gravity alone for 15 seconds but then between seconds 15 and 20 has a positive change in velocity of 1 m/s 2. For second 5 through second 25, which of the objects is/are moving with constant acceleration? Answer choice B is incorrect because country A's overall progress in height has been interrupted by periods of decline. 35. 1.E + 10 W/m2 D. 168 cm C. 174 cm B. Answer: D Answer choice D indicates a fact relevant to the purpose of the study. Refer to Tables 1 and 2 and Figure 1. It is equal to the number of ml of titrant used. Answer choice D indicated by the highest point of the distribution curve, is at about 153 cm for country A. After reading each passage, choose the best answer to each question. The adult height in country A became smaller during two periods in which glaciers are built up. 1. Ionic bonds are formed between atoms needing electrons to fill a nearly complete outer ring (positive valence) and those needing to get rid of atoms in a nearly empty outer ring (negative valence). 1 / 1,000 D. Based on Tables 1 and 2, which types of electromagnetic radiation are measured in the SORCE experiment by instruments other than the TIM? They are both negative. When pH 7.0 (acid neutrality) is reached, the reaction is complete. only object 3 B. 21. Based on Figure 2 and the relationship between 618O, glaciation, and climate, how long ago was the period with the coldest temperatures and the most glaciation? 16. two D. 11. A body of water that is experiencing eutrophication and a resulting bloom can be quickly devastated. The top layer of phytoplankton causes such a build-up on the surface that they accumulate sediment. The type of bacteria changes both in the patient and in the mice inoculated with the patient's infection, without any clear relationship between the two. That is why water has two hydrogen atoms to donate electrons and salt has only one sodium atom FacebookXRedditLinkedInEmail Comments are closed. The upper and lower limits of adult human height are relatively constant in different country. Based on Figure 3, which wavelength transmitted the highest level of solar irradiance? Country B must have had difficulties between 1890 and 1910 because the rate of increase in height of its people leveled off in that period. Which of the following statements about the samples taken directly from the patient and culture is correct and important for the study? Answer: A Electrons are negatively charged, so removing one produces a charge of +1. For object 1, this occurs between seconds 35 and 45. Atoms tend to bring their outer rings to capacity through some kind of collaboration or exchange with other atoms. Country B's adults started out taller than any other country's, and they've been getting taller at an increasing rate. The progress of the disease involves changes not only in the intensity but also in the nature of the infection. At right in Figure 1 is a representation of valency. Answer choice A is not correct. In each case, a mouse was inoculated with R bacteria from the colony. Table 1 and the bar chart in Figure 2 present an image of long-term trends in typical height. objects 2 and 3 D. Answer choice D is based on estimating the actual titrant volume at the point pH 7.0 is reached. Two hydrogen atoms are required to produce an even number of electrons with oxygen. Answer key provided at the end of the quiz! In this post, I'll tell you where you can find the official, online or printable ACT practice test with the answer key. 32. What best describes the difference between the lowest and the highest daily average of total solar irradiance (TSI)? According to Table 2 and Figure 3, what is the difference between the lowest and the highest daily average of total solar irradiance (TSI)? According to Table 2 and Figure 3, what is the difference between the lowest and the highest daily average of total solar irradiance (TSI)? According to Table 2 and Figure 3, what is the difference between the lowest and the highest daily average of total solar irradiance (TSI)? According to Table 2 and Figure 3. Practice Test 1 Test Name ACT Test Prep Category Free ACT Practice Test Knowledge tested ACT Science Test Type of Question (MCQ) 40 Total time duration 35 minutes Answers Available YES Recommended Devices Use a laptop or desktop Printable PDF Available The passages in this test are followed by several questions. Low 618O is the reverse. This is also the number of moles of HCl used, because one molecule of NaOH. You may refer back to the passages as often as necessary. It takes more hydrogen atoms to balance the weight of oxygen than sodium atoms to balance the weight of oxygen the weight of oxygen than sodium atoms to balance the weight of oxygen than sodium atoms to balance the weight of oxygen than sodium atoms to balance the weight of oxygen th power. H2O is positive and NaCl is negative. Great for test prep and review. Answer choice D is incorrect because the changes in gravitational force due to even the most extreme terrain changes are far too small to produce the result described. The attraction between the positive ions that give up their electrons and the negative ions that receive them helps to bind the resulting compound. The phytoplankton will also cause less surface area for the water to interface with air. In all three of the experiments. Answer choice D is incorrect because this reaction does not produce NH3, and there is no indication of NH3 being present or being introduced into the solution. All of the bacterial strains extracted and tested exhibited a change from R to S. Figure 1 illustrates the 618O cycle from seawater to the atmosphere to glaciers on land and back to seawater. After reading the passage, choose the best answer to each ACT Science practice question. Scientist 1 The root cause of eutrophication is not known. Answer choice A is incorrect because there was no point shown at which country B's adult height decreased. Get started with your ACT Science prep right now! Directions: The passage below is followed by several questions. How many grams of HCl must be dissolved in a 20 ml solution to bring it to a concentration of 0.1 M? Approximately what proportion of the average daily solar irradiance is the difference between the week's highest level and its lowest level? The original type I strain seems to have been weakened or transformed to others, but there is no evidence that it destroyed itself. Object 3 has been shown to be operating only under the influence of gravity, producing a change in velocity of -49 m/s every 5 seconds for the entire period, including the one asked about here. 28. infrared Answer: B The largest area under the SSI curve occurs between approximately 400 and 700 nm, which is the visible light range. The lowest δ18O level shown is about 2.8, which occurred at about -1.85 million years. Prepare your ACT Science final exam test. than 500 nm. Only answer choices A and B state that the object is traveling downward at second 0. Get free access to ACT practice quizzes covering real questions from the science test. Based on Figure 2 and the relationship between 6180 and the numbered, rather than on the observed operation of the bacteria. For significant time periods, some country A's increase and country A's increase and country B's height in approximately the same pattern as others. An upward force adequate to cause an acceleration of 10 m/s2 was applied. For the periods, some country B's height in approximately the same pattern as others. An upward force adequate to cause an acceleration of 10 m/s2 was applied. For the periods, some country B's height increase is less than both the global increase and country B's height increase and co 2 Sometimes eutrophication can happen naturally without any real cause. The first ring's capacity is two electrons. NaCl is positive and H2O is neutral. C. Answer: C The reaction involves one molecule of each substance. Next Practice >> ACT Reading Practice >> ACT Math Practice >> act. org, acts tudent. org,Last Updated on December 26, 2020 ACT Science Practice Test 1 (40 questions) with Answers and Explanation. Pneumococcus strains do apparently shift their characteristics significantly over time, and it is possible to learn about the conditions under which this happens. The difference is 0.2184 W/m2. 2,513.E - 4 W/m2 kinetic theorem about the conditions under which this happens. The difference is 0.2184 W/m2 kinetic theorem about the conditions under which this happens. The difference is 0.2184 W/m2 kinetic theorem about the conditions under which this happens. The difference is 0.2184 W/m2 kinetic theorem about the conditions under which this happens. The difference is 0.2184 W/m2 kinetic theorem about the conditions under which this happens. The difference is 0.2184 W/m2 kinetic theorem about the conditions under which this happens. -2.00 million years Answer: B Temperature swing is indicated by the difference between the highest and lowest 6180 levels. The appearance of type VI bacteria indicates that the disease has run its course. Answer choice A is not correct because we do not know why no culture was made on day 19. Answer: A In Table 1, downward velocity is represented by negative numbers, and upward velocity is represented by negative numbers. positive numbers. NaOH C. Answer: A It reports what the chart indicates. That electron is given up when sodium is ionized, leaving the first two rings. Answer choice C is incorrect. 31. NaOH, NaCl, and NH3 Answer: C NaCl is a product of the reaction. SSI provides a profile of solar irradiance delivered by wavelength range. The solution to the problem is to either move the drainage so the runoff from the human farming activity cannot reach the water source or move the farms. It leveled off and was flying at the same altitude for that time period. Which statement is supported by Figure 1? The valency of an atom is the number of surplus or deficit electrons in its outer ring. The valency of an atom is the number of surplus or deficit electrons in its outer ring. The valency of an atom is the number of surplus or deficit electrons in its outer ring. the most solar irradiance? The blood of each deceased mouse was then cultured and tested for pneumococci that were examined to determine whether they were R or S bacteria. Where other forces have been applied, they always begin and end at one of the 5-second intervals. at least 30 C. objects 1 and 3 D. The highest point is approximately 2.1 W/m2/nm (watts/meter2/nanometers). Answer choice A correctly states that the object's speed decreases after second 30 as indicated by the downward slope in Figure 1 and the decreasing numbers in Table 1. Object 3 experiences a reduction of 49 m/s in velocity every 5 second 45. The evaporated water falls as precipitation, forming low 6180 glaciers. Table 1 indicates that that point is a bit before second 45. The evaporated water falls as precipitation, forming low 6180 glaciers. 10. Figure 1 illustrates how they are arranged in the satellite. From -0.90 to -1.75 million years, δ18O rose to 1 and no lower, almost like clockwork. Mouse A was inoculated with untreated infected material. ACT Science Passage III—Conflicting Viewpoints A geneticist and a physiologist each explained what causes the wide variety of different height profiles found among countries and ethnic groups on the planet. This is a measure of the intensity of solar irradiance by wavelength. It travels upward at increasing speed until second 30 and then continues upward at increasing speed until second 45. 160 is lighter than 180, so it evaporates first from seawater. Based on Figure 3 and Table 1, which type of electromagnetic radiation carries the most solar irradiance? 23. 24. One sodium atom provides the one electron that chlorine needs, but it takes two hydrogen atoms to provide the two electrons whirl around the nucleus in what are called shells, rings, or bits, or energy levels. Sodium and chlorine start with the same number of electron rings, but hydrogen has only one ring to oxygen's two. gamma ray, x-ray, visible light B. The growth of the phytoplankton is caused by runoff that contains multiple sources of nitrates that are also found in fertilizer. The highest δ18O level shown is about 2.5, which occurred at about -0.65 million years. 460 nm D. I'll also give you key strategies and resources to help you make big improvements while you prep for the ACT. Table 2 reports those results. 8.00 grams B. Oxygen needs two. Answer choice A ignores the differences. Answer choice D ignores the differences and choice D ignores the differences. Answer choice A, B, and D are not supported by the data given. ultraviolet B. two C. This in turn creates favorable conditions for the phytoplankton to grow and proliferate. The adults of country B have been above the global typical height since at least 1750, and this difference has increased significantly throughout the period from 1750 to 2010. When more people move from country, genetic diversity produces taller adults. Which answer is the most important statement supported by the data reported from the three experiments? Over 1000 ACT science questions to help you with your ACT test prep. Figure 3 shows the SSI for December 24, 2010, in watts/meter2/nanometer (W/m2/nm) Since a mole of any substance has the same number of particles as a mole of any other substance, this reaction requires the same number of moles of each. Oxygen needs two, but hydrogen only has one per atom to provide. For the purpose of simplification, the pneumococcal types I through VI referred to here do not necessarily correspond either to those used in the original study or to those in current usage. What is the best description of the relationship between the shapes of the three curves shown in Figure 1? The algae grows to an unreasonable level at a very fast rate. The global curve is symmetrical. Table 1 shows the results. We can calculate that the change in direction occurs at 9.8 seconds. An upward force slightly greater than the force of gravity is required to produce this small upward acceleration. A series of experiments involving pneumococci were conducted to determine whether and how these changes take place. Based on the data presented here about ionic bonding, which element other than sodium would chlorine (Cl) be most likely to form an ionic bond with? Ionic bonding involves a combination of atoms having only one or two electrons in their outer rings with others that need only one or two electrons to complete their outer rings. The other rings each have a capacity of eight electrons. Answer: C The key in ionic bonding is not the number of atoms combined, but the number of electrons required or available to produce complete outer electron rings. Therefore, everything above represents downward motion, and everything above represents upward motion, regardless of which direction the line on the graph is headed. Heat the neutralized solution until all water is evaporated and weigh the solid crystals that remain. x-ray, ultraviolet, visible light, infrared C. 22. Experiment 2 A subsequent study was conducted to determine what happens to strains of pneumococci in a disease victim. NaCl B. Table 1 and Figure 1 provide information about the vertical velocities measured for three different objects without regard to the horizontal motion of the objects. As a result, there will be less oxygen available in the water. Any of the mice survived. Low 618O water evaporates from the ocean, leaving higher 618O water behind. We do not know if the trial ended at that point. Try our free ACT Science practice tests. These other forces, acting in combination with gravity, can cause a net force greater than or less than gravity, and, therefore, a net acceleration different from the downward acceleration of 9.8 m/s2 caused by gravity. Answer choices B and C give the results in the wrong order. Answer choice D is the only answer that approximates that. The high 618O periods are when 16O evaporates from the seawater and is frozen into glaciers. ACT Science Passage V—Research Summary Microbe populations, including those of disease-producing bacteria, can change their characteristics over relatively short periods of time. Based on Figure 1, what is a typical height in country A? This type of bloom is nature's way of eliminating overpopulations, including those of disease-producing bacteria, can change their characteristics over relatively short periods of time. objects may be traveling solely under the influence of gravity for the entire period shown? They are scientifically identical. 09.99, 21.95, 20.10 D. 9. Table 1 and Figure 2 present the same basic data as Figure 1 but in different formats. In light of the information presented here, what is the best explanation for why it takes one sodium atom to form a compound with one chlorine atom, but it takes two hydrogen atoms to form a compound with one oxygen atom? 39. Cultures were grown from these samples in three ways and analyzed. 20.00, 10.00, 22.00 B. In glacial periods, oceans are richer in 180, but in interglacial periods the glaciers melt and 160-rich water flows back into the oceans. Figure 2 shows how this works in the case of two common substances, H2O and NaCl, water and salt. The solution to be titrated is precisely 20 ml of hydrochloric acid solution at a concentration between 0.1 M and 0.3 M. The patient was cured by day 19. When this occurs the sunface. This is a natural cycle that also ensures that too many fish and other animals do not build up in a freshwater source. SSI is the energy level that strikes the earth. TSI is the total amount of power delivered through a given cross-sectional area. ACT Reading Passage IV—Research Summary NASA is operating the satellite-based Solar Radiation and Climate Experiment (SORCE). It travels downward from second 0 for 9.8 seconds. 0.00 to -0.50 million years D. 26. However, the frequency and increasing incidents of eutrophication point to human farming activity as the potential cause. The mass of HCl is determined by multiplying the number of moles by the mole mass, which is 36.5 grams. None. What is the best explanations include answers and detailed explanations. If the line is moving upward above zero, this means the object is moving upward at an increasing speed. SSI is a measure of the same power separated into different wavelength ranges. In freshwater ecosystems, the algae can become so dense that it can turn ponds, lakes or even smaller rivers green. 0.12 million years C. SSI is the residual effect of that power after it has passed. The mice either died after between 2 and 12 days or survived indefinitely. SOLSTICE A and B each cover part of the ultraviolet range. On ACT's ... Test your knowledge with ACT science practice questions. 4. Answer choice D because it gives the volume of the titrant only to the closest 0.25 ml shown on the table. The first ring has two and the second has eight. That is a range of only 2 between high and low. The measure of how far above normal the concentration and the second has eight. of 18O in a sample it is called \( \text{018O}\). Answer: C Answer choice C provides the most complete description of the similarities and differences. 19. x-ray Answer: C According to Figure 3, almost all of the irradiance is shown on the y-axis. hydrogen is able to donate it. 3. The reaction of hydrochloric acid (HCl) and sodium hydroxide (NaOH), a strong base, is represented as HCl + NaOH \( \text{ H2OH}\) H2O + NaCl. This experimental series involves three trials. Get your game on with ACT QuizMe ACT practice quizzes in math, English, reading, and science. (A 1.0 M concentration means 1.0 mole/1.0 liters of water.) The resulting products, water and sodium chloride, are acid neutral. Referring to Figure 2, how many periods of glacial buildup occurred between 0.25 and 0.50 million years ago? The infrared area from 700 to 2,500 nm is significantly larger. 25. To calculate the answer precisely, first divide the results reported for each 5 seconds by 5 to convert them to 1-secondinterval results. A single type of bacterium infects the victim and then reproduces until it kills the patient or the patient will help to thin theaps. Table 1 shows the instruments used and the wavelength (λ) range monitored by each. Although many organisms will die as a result, it will help to thin theaps to the patient will help to thin theaps to the patient or the patient will help to the patient numbers of organisms and ensure a healthier freshwater source. One represents an estimate of global averages, and the other two are estimates for two countries. Based on the formula for the reaction between hydrochloric acid? The cultures taken directly from the patient showed first type I, then type IV without type I, and then type VI without either type I or type IV. The height of country B's adults increased even when country A's decreased. All bacteria are potential killers. For the rest of the span of time shown, the δ18O high levels were generally above 1 and as high as 2.7. The lows were as low as -2.7. ACT Science Passage VII—Data Representation Valency is a concept in chemistry that provides rules for determining which chemical elements can combine in what proportions to form compound substances. Sometimes when there are periods of heavy rain, the increase in rain water leads to an imbalance in the pH of the water. three D. Experiment 1 A five-year study was conducted of the prevalence of each type of pneumococcus found in pneumonia victims. Figure 2 is a simplified representation of the changes in seawater 618O for the past 2,000,000 years. The algae are known as phytoplankton and are microscopic, single-celled organisms. Mice are more susceptible to disease than humans. As oxygen continues to deplete, the depletion can have a negative effect on life as there will be less oxygen to support the organisms. Mice are more susceptible to disease than humans. As oxygen continues to deplete, the depletion can have a negative effect on life as there will be less oxygen to support the oxygen to support the oxygen from plants that diffuses into the water. Although the patient started with evidence of only type I infection, that disappeared, to be replaced by first type IV and then type VI infection. Type I dominated the results of the inoculated mouse A, but it did not appear in the day 15 or 17 samples. The definition of SSI given in answer choice A has no definite meaning. The geneticist pointed to data such as that represented by Figure 1. Tables 1 and 2 show how each atom borrows or loans electrons. either to complete or to empty its outer ring. In interglacial periods, the glaciers melt, and 160 flows back into the end of this course of illness is refuted. From the standpoint of understanding how bacterial strains change over time, what is the most interesting thing about the results reported in Table 3? Answer choice c, which is correct until that point, incorrectly states that the object's speed continues to increase. When the graph line crosses 0, this indicates that the direction of the ultravioleting that point is correctly states that the object's speed continues to increase. When the graph line crosses 0, this indicates that the direction of the ultravioleting that point is correctly states that the direction of the object changes at that point is correctly states that the object changes at that point is correctly states that the object changes at that point is correctly states that the object changes at that point is correctly states that the object changes at that point is correctly states that the object changes at that point is correctly states that the object changes at that point is correctly states that the object changes at that point is correctly states that the object changes at that point is correctly states that the object changes at that point is correctly states that the object changes at that point is correctly states that the object changes at that point is correctly states that the object changes at that point is correctly states that the object changes at that point is correctly states that the object changes at that point is correctly states at the object changes at that point is correctly states at the object changes at that point is correctly states at the object changes at that point is correctly states at the object changes at that point is correctly states at the object changes at that point is correctly states at the object changes at that point is correctly states at the object changes at the object changes at that point is correctly states at the object changes a visible light, and infrared spectrums. 1.93 million years D. Table 2 names the major categories of electromagnetic radiation and shows the frequency range included in each. TSI is the total solar energy measured. 1/ 150 C. Based on Figure 1, what is the most typical height in country B? Protons and neutrons together form the nucleus at the center of an atom. 14. Object 1 has an upward (positive) change in velocity of 51 m/s every 5 seconds for the period being looked at. The mice became infected with whatever bacteria the patient was infected w detailed explanations. You are not permitted to use a calculator on this test. Object 3 begins with an upward velocities indicate motion downward. There was not predict. Calculators may NOT be used on this test. three B. D. Positive velocities indicate motion downward. There was not permitted to use a calculator on this test. Object 3 begins with an upward velocity of 490 m/s but is reduced by exactly 49 m/s during every 5-second interval shown. Bacteria undergo random mutations that we cannot predict. only one fatality in the mice inoculated with strains 4 and 6, and that took much longer than the deaths caused by the other strains. 20. Figure 1 indicates that the object reaches zero velocity at approximately 10 seconds. five C. 0.365 grams D. People in country B are better nourished than those in either the global average or country B are better nourished than those in either the global average or country B are better nourished than those in either the global average or country B are better nourished than those in either the global average or country B are better nourished than those in either the global average or country B are better nourished than those in either the global average or country B are better nourished than those in either the global average or country B are better nourished than those in either the global average or country B are better nourished than those in either the global average or country B are better nourished than those in either the global average or country B are better nourished than those in either the global average or country B are better nourished than those in either the global average or country B are better nourished than those in either the global average or country B are better nourished than those in either the global average or country B are better nourished than those in either the global average or country B are better nourished than the global average of the g met and return the 16O to the seawater. Objects 1 and 3 Answer: D Constant acceleration means that the change in velocity for the period specified from second 5 to second 25 must always be the same. Between -1.25 and -1.50 million years there are four δ18O troughs. Based on the overall findings reported by Table 2, which of the following answers is most correct? 20.10, 09.99, 21.95 Answer: D The tables show only the pH levels for every 0.25 ml of titrant added. Country A needs a national fitness program. First, samples were taken from a patient who was initially analyzed to be infected only with type I pneumococci. Then it travels upward with increasing speed until second 30. Answer: B Table 1 and Figure 2 accurately describe the time comparison shown, which consists of data absent from Figure 1. 1.85 million years B. The NaOH titrant continued to be added after the reaction was complete, so NaOH will also be present. All of the bacterial strains, without exception, changed from R to S. 13. TSI is the total solar energy measured in space. 2.0 nm C. microwave D. These colonies were cultured in laboratory conditions to eliminate uncertainties of the previous experiments. gamma ray B. 158 cm D. How should the mass of HCl in the titrated solution be calculated? Some countries have larger typical adult heights than others, but that is to be expected. Which statement is best supported by the data in Table 2, viewed in conjunction with the other data? Chlorine needs only one and sodium has one extra to provide. On day 8 mouse A was infected with type VI, which did not appear in the patient until day 17. People in crowded areas are smaller than people in rural areas. It examined changes both to the pneumococci infecting the victim and to those extracted from the victim. This shows that instead of the 9.8 m/s2 downward acceleration due to gravity, object 2 experienced +0.2 m/s2 upward acceleration due to the unknown force. Answer choice g misidentifies the difference in shape as a difference irradiance (SSI). The electrons of sodium and chlorine total 28, which is an even number. Table 1 indicates the vertical velocities of the three different objects as measured every 5 seconds. ACT Science Passage I—Data Representation The earth's gravitational force produces a downward acceleration of 9.8 m/s2 on all objects near the earth's surface. It is computed as follows: Thus high 618O means more 18O and less 160 than normal. four Answer: D Glacial melts dilute the high 6180 seawater with 160-rich glacial water, and are marked by low 6180 seawater with 160-rich glacial melts dilute the high 6180 seawater with 160-rich glacial melts dilute the high 6180 seawater. There is also nothing to support answer choice D. Refer again to Figure 3. The molar mass of HCl is 36.5 grams and the molar mass of HCl is 36.5 grams and the molar mass of HCl is 36.5 million. vears B. 36. Answer choice A is incorrect because Figure 1 presents no data on change over time. The physiologist said there were significant differences between the global profile and those of the two countries in terms of nutritional and other health-related factors. Consider the results reported in Table 2. The final calculation is 0.2 moles/liter × v liters × 36.5 grams/mole. It continues to move upward at a continually decreasing speed until second 45. According to Tables 1 and 2, what is the resulting charge of each compound? You can download Full ACT Science Practice Test PDF in a printable and editable file for free. Five different instruments are mounted in the satellite to achieve coverage of the desired spectrum range. make sense based on other inputs. Country B's curve increases gradually from the left, remaining below the other two curves until it approaches its peak; then it descends more steeply to the right but always remains above the other two curves. Which is the most complete statement about country B's between 1750 and 2010. NaOH and NaCl D. She also pointed to estimated historical data. Other forces, including those produced by wind and aerodynamic lift, as well as jet, rocket, internal combustion or other engines may also exert upward or downward forces on these objects. 27. 22.00, 10.00, 20.00 C. 2,500 nm B. She argued that if genetics determined the height, no such change would occur. They are both neutral. Answer: B Multiplying the concentration of the titrant diven in moles/liter (M), by the number of moles of NaOH in the titrant that were used in the reaction. A. Due to their electrically neutral compounds, During what period shown on Figure 2 were the temperature swings between glacial buildups and glacial buildups and glacial melts consistently the most mild over an extended period of time? A solution of known concentration, called the titrant, is slowly added, in measured amounts, to the solution being titrated. Answer choices C and D are conjectures for which there is no strong evidence presented in the table. 1.6000 B. Bacteria change by escalating from lower types to higher types. 15. Figure 2 shows the average daily TSI, measured in watts/meter2 (W/m2) as measured by the TIM for December 20 through 26, 2010. Country A's adults started out shorter than any other country's, but they've been gaining slowly and consistently. Its purpose is to improve our understanding of the nature, including changes in quality and intensity, of solar radiation reaching our planet, by continuously monitoring the intensity of solar radiation by time and by frequency. radio waves C. Answer: D From 1810 and 1830 and again from 1890 to 1930, country A's typical adult height was reduced. Answer: B The consistency of this result is a strong indicator that the colonies do change their characteristics in a systematic way. Answer choice C is not supported by Figure 2. It then continues to move upward with a more gradual increase in speed until second 45. 18. 37. one B. (c × v) × 40.0 g, where c is the concentration of the titrant (0.2 moles/liter) and v is the volume in liters of the titrant used to reach pH 7.0. B. Table 3 reports the results. Then mouse B was inoculated with type I bacteria, and with the infected material from the patient. The shapes are identical, but the positions of the curves for countries A and B are shifted to the left and right, respectively, of the global curve. The first was simply to grow bacterial colonies from the sample in petri dishes. That would have to be approximately (2 /1.6) × 10-4. Which statement about country A is supported by Table 1 and Figure 2? 1.5 E-4 Answer: D The proportion is approximately (2 /1.6) × 10-4. Which statement about country A is supported by Table 1 and Figure 2? 1.5 E-4 Answer: D The proportion is approximately (2 /1.6) × 10-4. Which statement about country A is supported by Table 1 and Figure 2? 1.5 E-4 Answer: D The proportion is approximately (2 /1.6) × 10-4. Which statement about country A is supported by Table 1 and Figure 2? 1.5 E-4 Answer: D The proportion is approximately (2 /1.6) × 10-4. Which statement about country A is supported by Table 1 and Figure 2? 1.5 E-4 Answer: D The proportion is approximately (2 /1.6) × 10-4. Which statement about country A is supported by Table 1 and Figure 2? 1.5 E-4 Answer: D The proportion is approximately (2 /1.6) × 10-4. Which statement about country A is supported by Table 1 and Figure 2? 1.5 E-4 Answer: D The proportion is approximately (2 /1.6) × 10-4. Which statement about country A is supported by Table 1 and Figure 2? 1.5 E-4 Answer: D The proportion is approximately (2 /1.6) × 10-4. Which statement about country A is supported by Table 1 and Figure 2? 1.5 E-4 Answer: D The proportion is approximately (2 /1.6) × 10-4. Which statement about country A is supported by Table 1 and Figure 2. and object 3. radio, microwave, infrared, ultraviolet D. Each of the objects is operating under the influence of gravity for the entire 45 seconds being studied. There is no significant relationship. Experiment 2 The other instruments measure irradiance by wavelength. The height of country A's adults increased even when country B's decreased. The bacteria can never be completely eliminated. The smooth, encapsulated bacteria are the most dangerous because they are coated with material that protects them from antigens. Answer choice C is not supported. 40. Hydrogen is atomic number 1, and sodium is 11. The nitrates allow for the phytoplankton to grow rapidly. enough to neutralize the HCl B. The force of gravity was reduced because it was flying over a deep valley. Answer: C For the period from second 15 to second 35, object 2 has a positive change in velocity of 1 m/s every 5 seconds. ACT Science Passage II—Research Summary Titration is a method used to measure the concentration level of a given substance in a solution. The magnitude of irradiance delivered by the other types does not even appear clearly on the graph. Changing from negative to positive velocity means it changes direction from downward to upward. How many ml of titrant were used in the trials? As shown in Figure 2 and Table 1, hydrogen and sodium each have only one electron in their outer rings. Passage I Eutrophication is a phenomenon where excessive amounts of nutrients are added to a marine ecosystem. 0.2184 W/m2/nm C. Answer choice B is in the wrong units, and answer choice B is in the of each object at every point during the 45 seconds under review. Each curve shows the reported distribution of the spectrum of heights. What substances should we expect to discover in the titrated solution at the end of the trials? Hydrogen and oxygen are equally likely. Which answer best describes the motion of object 1? (Note: each day a different mouse B and mouse A were used.) Experiment 3 The next experiment examined the changes that occurred when bacteria from six different pneumococcal colonies were used to inoculate mice only object 3 Answer: B For at least part of the period shown, objects 1, 2, and 3 experiment examined the change in velocity of -49 m/s every 5 seconds, which is the magnitude of change gravity causes. 6. ACT Science Passage VI—Data Representation Variations in the proportion of the two major isotopes of oxygen, 18O and 16O, in seawater or landbased water, including glacial ice, are believed to be a proxy for changes in temperature. Object 1 has a positive change of 51 m/s in the first 5 seconds. Answer choices C and D refer to solar energy, but TSI and SSI are magnitudes of power, not energy. second was to examine what happened when the same bacteria infected others. He argued that the distinctive height profile of each separate population grouping supported the hypothesis that height is determined by each gene pool. only object 3 Answer: D The force of gravity produces an acceleration of -9.8 m/s2. 30. 12. objects 1, 2, and 3 C. If the falling water freezes, glaciers are formed, which trap the low 180 precipitated water. 38. 0.0730 grams C. When sodium (Na) is stripped of the one electron in its outer shell, what is the highest number of glacial melting periods to occur within one 0.25-million-year span? An upward force adequate to cause an acceleration of 0.2 m/s2 was applied. 0.65 million years D. -0.90 to -1.75 million years D. what hypothesis is supported by a comparison of the three curves in Figure 2 and the explanations presented here, how many electron rings does a positive sodium ion have? (c x v) x 36.5 g, where c is the concentration of the titrant used to reach pH 7.0. C. Answer choice D is incorrect because it is also supported by Figure 1. This test contains 5 ACT science practice questions with answer explanations, to be completed in 5 minutes. Type IV bacteria are the mildest of those involved with this disease. Its velocity has nearly leveled off, but it is still falling at nearly 100 m/s. objects 1 and 2 C. exactly 30 Answer: A The table shows that at least 30 ml were added in each trial. B. Answer choice B incorrectly claims that all of the samples changed, but the surviving mice were not tested. Add 0.2 m/s2 to 9.8 m/s2 to 9.

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