

1. A "bidirectional" variation of this algorithm passes through the list twice per iteration and is also called "shuttle" or "cocktail," and "odd-even" sort is a parallel-processing optimized alteration; the first method eliminates the problem of small elements at the big-element end, which are called "turtles" since they uniquely must travel the full length of the list. For 10 points, name this naïve big-oh-of-n-squared sorting algorithm, in which repeated passes are made swapping adjacent out-of-order elements, such that the small elements float to the top.

ANSWER: **bubble** sort

022-09-2-07101

2. Archbishop Raul Silva Henriquez brokered an agreement that allowed for the succession to this man's regime, and he was succeeded by Patricio Aylwin Azocar. This man oversaw Operation Columbo and his government coordinated with other regional countries in Operation Condor. He was arrested in Great Britain in 1998 upon Spain's request for the extradition of this man. For 10 points name this man who overthrew the government of Salvador Allende to become the longtime dictator of Chile.

ANSWER: Augusto **Pinochet**

030-09-2-07102

3. The potential of these phenomena can be determined by the six Doodson numbers. These phenomena can be modeled as a sheet flow using Laplace's equations for these occurrences, and Ballantine created a scale to measure the exposure of organisms in areas impacted by these phenomena. Bores related with these phenomena can travel against the direction of current, and reduced forms of these events are labeled neap. For 10 points, name these natural phenomena caused by the gravitational forces of the sun and the moon on the Earth's oceans.

ANSWER: **Tides**

036-09-2-07103

4. The narrator of this novel finds a notebook with the sentence "What has our government done to make life easier for the Alaskan Eskimos?" written inside. A few days earlier in this work, an accusation of "giving her the time" causes the narrator to fight with Stradlater. In 2009, this book's author filed suit against an unauthorized sequel entitled *60 Years Later*. This book follows the narrator's reunion with his sister Phoebe and ambiguous encounter with Mr. Antolini after leaving Pencey Prep. For 10 points, name this novel about the phony-hating Holden Caulfield by J.D. Salinger.

ANSWER: *The* **Catcher in the Rye**

019-09-2-07104

5. This god is sometimes known as the "drowned one," as he drifted in a sarcophagus across the Mediterranean Sea to Byblos. After being found again by his wife, his brother became jealous, and cut this god into fourteen pieces. Dead pharaohs were associated with this god, who is depicted as the god of the underworld. For 10 points, name this Egyptian god, who fathered Horus with his wife and sister Isis.

ANSWER: **Osiris**

003-09-2-07105

6. Meliton Kantaria was the subject of a famous photograph taken at the conclusion of this battle. Vasily Chuikov accepted the losing side's surrender at this battle's conclusion. The Volkssturm played a major role in this battle. This battle ended with the raising of the Soviet flag above the Reichstag and with Karl Dönitz (DUHr-nitz) becoming the last Führer (FYUHR-er) of the Third Reich. For 10 points, name this battle that concluded World War II in Europe, during which Adolf Hitler committed suicide in a bunker underneath the namesake city.

ANSWER: Battle of **Berlin**

030-09-2-07106

7. One character in this show changed the past by preventing his sister's favorite dress from being covered in Slushie. Another character returned to being himself after being forced to impersonate a US Senator he had killed. Ali Larter's character, assumed dead after being shattered, was shown to have returned at the start of Season Four. Claire and Noah Bennet are both adjusting to living on their own in this series. For 10 points, name this NBC series in which the title people, such as Hiro Nakamura, save the world from characters like Sylar.

ANSWER: **Heroes**

002-09-2-07107

8. This composer used strings to accompany the words of Jesus, creating a so-called "halo" effect, in his setting of the sufferings of Christ. This composer wrote fifteen Two-Part Inventions for his pupils, as well as choral works such as the *St. Matthew Passion*. Glenn Gould specialized in playing works of this composer, such as *The Art of the Fugue* and the *Goldberg Variations*. For 10 points, name this eighteenth-century German composer of *The Well-Tempered Clavier* and the *Brandenburg Concertos*.

ANSWER: Johann Sebastian Bach [prompt on Bach; prompt on Johann Bach]

004-09-2-07108

9. Howard Hyde Russell was the first superintendent of a league whose name stated that it was anti- these locations. Several of these institutions were subject to "hatchetations" from Carrie Nation. The Number 10 one of these in Deadwood, South Dakota, was where Wild Bill Hickok played his last game of poker. These establishments were often entered through swinging doors still sometimes named after them. For 10 points, name these buildings where a man in the Old West could find both entertainment and alcohol.

ANSWER: saloons

003-09-2-07109

10. When one of these constructs is traced out pictorially, there will exist one or two Dandelin Spheres tangent to the plane that traced it out. Studied in antiquity by Apollonius of Perga, in the two body problem, if the center of mass is assumed to be at rest, the paths of the bodies will follow one of these paths. In polar coordinates, they take the form of  $l$  over the quantity one plus  $e$  times cosine of theta, where  $l$  is the semi-latus rectum and  $e$  is the eccentricity. For 10 points, name these mathematical curves that include the ellipse, parabola, and hyperbola.

ANSWER: Conic Sections

040-09-2-07110

11. In one story by this author, the mute Lucynell is married off to Tom Shiftlet and observes the title admonition on a billboard. Enoch Emery briefly joins the "Church Without Christ," run by Hazel Motes, in a novel by this author of *Everything that Rises Must Converge*. This woman wrote a story about a family that dines at Red Sammy's on a road trip. That road trip in a work by this author is diverted when The Grandmother gives faulty directions and the car rolls into the ditch. For 10 points, name this Southern gothic author who created the serial killer The Misfit in "A Good Man is Hard to Find."

ANSWER: Mary Flannery O'Connor

020-09-2-07111

12. This entity was involved in the court case that established the need for public figures or officials to prove actual malice to win a libel suit after being sued by Montgomery, Alabama, police commissioner L.B. Sullivan. In another case involving this newspaper, a government report leaked by Daniel Ellsberg to the Washington Post and this newspaper resulted in the Supreme Court knocking down prior restraint. For 10 points, name this newspaper owned by the Sulzberger family and nicknamed "The Gray Lady."

ANSWER: The New York Times

049-09-2-07112

13. This piece includes an "extra" movement between its scherzo and finale, and its long title describes this work as "the expression of feeling rather than painting." Its second movement has the flute, oboe, and clarinet representing the nightingale, quail and cuckoo, respectively, and its third movement includes a peasant dance that is interrupted by a thunderstorm. For 10 points, name this Beethoven symphony about scenes from rural life.

ANSWER: Pastoral Symphony [or Symphony No. 6 by Beethoven; or Beethoven's Sixth Symphony; or Beethoven's Op. 68; or Symphony No. 6 by Beethoven after "Beethoven"]

030-09-2-07113

14. This man was defeated by the forces of Alvaro Obregon at the Battle of Celaya. This man formed the Division of the North following the assassination of Francisco Madero. This leader was assassinated at his hacienda in Hidalgo del Parral. This rebel executed dozens of U.S. citizens in Santa Isabel and Columbus, New Mexico. For 10 points, name this Mexican bandit who was unsuccessfully pursued by General John J. Pershing in a 1916 expedition.

ANSWER: Pancho Villa [or Francisco Villa; or Doroteo Arango]

030-09-2-07114

15. This poet asked "Who breaks a butterfly upon a wheel?" in a poem defending his use of satire. This author wrote a poem in which the goddess Dulness crowns Colley Cibber as the King of Dunces. This author of "Epistle to Dr. Arbuthnot" wrote "A little learning is a dangerous thing" and "fools rush in where angels fear to tread" in his *An Essay on Criticism*. For 10 points, name this seventeenth-century British poet of *The Dunciad* and *The Rape of the Lock*.

ANSWER: Alexander Pope

004-09-2-07115

1A. The structure of what organic compound allegedly was revealed to Frederick Kekule when he had a dream about a snake eating its own tail?

ANSWER: **benzene** [or **benzol**]

1B. What man failed to avoid a runoff in his August 2009 reelection bid to maintain Afghanistan's presidency?

ANSWER: Hamid **Karzai**

2A. What Massachusetts Senator passed away in August 2009 after suffering from a brain tumor?

ANSWER: Edward Moore "Ted" **Kennedy**

2B. What form of understatement is exemplified by saying "not unattractive" instead of "attractive?"

ANSWER: **litotes**

3A. The Bonneville Flats are near what body of water that is at the base of the Wasatch Range and whose namesake city is the capital of Utah?

ANSWER: The **Great Salt Lake** [do not accept "Salt Lake City"]

3B. What sculptor created the first freestanding nude since antiquity with his bronze *David*, and also sculpted the equestrian *Gattamelata*.

ANSWER: **Donatello** [or Donato di Niccolo di Betto **Bardi**]

4A. This is a 10-second calculation question. What is the sum of the infinite series beginning 1, 1/2, 1/4,....?

ANSWER: **2**

4B. This is a 10-second calculation question. What is the sum of the exterior angles of a dodecagon?

ANSWER: **360**

5A. What type of volcano is exemplified by the gently sloping sides of the Hawaiian island volcanoes?

ANSWER: **shield** volcano

5B. What model organism is a type of insect that was first extensively used by Thomas Hunt Morgan?

ANSWER: **fruit flies** [or **Drosophila melanogaster**; or **D. melanogaster**; or pomace fly; or vinegar fly; or wine fly\_]

6A. This is a 20-second calculation question. Factor the following expression:  $x^2 + 23x + 130$ .

ANSWER: **(x+10)(x+13)**

6B. This is a 20-second calculation question. How much money is 3 quarters, 5 dimes, 7 nickels, and 9 pennies?

ANSWER: **1.69**

7A. Along with "estar," what is the other infinitive form of the verb "to be" in Spanish?

ANSWER: **ser**

7B. What baseball player attended Maple Woods Community College and currently stars as the first baseman for the St. Louis Cardinals?

ANSWER: Albert **Pujols** [or Jose Alberto Pujols Alcantara]

8A. Philip Nolan is the Aaron Burr-befriending title character of what Edward Everett Hale short story about a person with no homeland?

ANSWER: "The **Man without a Country**"

8B. Who invented the automatic stock ticker and the phonograph?

ANSWER: Thomas Alva **Edison**

9A. This is a 30-second calculation question. In their first year of college, students must take one or two of the following classes:

Freshman English, Freshman Calculus, and Freshman Chemistry. In a group of 200 students surveyed, 150 took English, 100 took Calculus, and 75 took Chemistry. If 50 students took both English and Calculus, but not Chemistry, and 25 students took both Calculus and Chemistry, but not English, how many students did not take Calculus?

ANSWER: **100** students

9B. This is a 30-second calculation question. In his Algebra class, Timmy's final grade is based upon his score on 3 midterm tests and 1 final exam. Each test is worth 20 percent and the exam is worth 40 percent of his grade. Assuming a passing grade is 70 percent, what grade must Timmy make on his final exam to pass, given that on the three midterms, Timmy's scores were 75, 40, and 65 respectively?

ANSWER: **85** percent

10A. What artist is noted for songs like "Shake Ya Tailfeather," "Country Grammar," and "Hot in Here?"

ANSWER: **Nelly** [or Cornell **Haynes** Jr.]

10B. In economics, give the term that refers to the ratio of the percent change in one variable to the percent change in another.

ANSWER: **elasticity**

026-09-2-07116

1. One statement of opposition to these laws was the Suffolk Resolves. One component of these laws introduced French civil law and toleration of Catholics to a certain region. Another of these laws installed Thomas Gage as military governor, revoking the colonial charter of Massachusetts. Other laws in this group required the quartering of troops in private homes and closed the port of Boston until payment was received for destroyed tea. For 10 points, name this set of four laws that were issued by the British cabinet in 1774 in response to the Boston Tea Party, and which American colonists could not bear obeying.

ANSWER: **Intolerable** Acts [or **Coercive** Acts]

019-09-2-07117

2. One title used for this man is "Father of Dust," and during the Battle of Khaybar, this man tore off the door of a fort and used it as a shield. This man's forces were victorious at the Battle of the Camel. This man slept in Muhammad's bed as a decoy to Muhammad's attempted assassins during the Hegira. Some sources claim that this man was the only person born in the Ka'bah, and after Khadijah, he is said to be the second convert to Islam. For 10 points, name this husband of Muhammad's daughter Fatima, the first Imam of Shia Islam.

ANSWER: **Ali** [or **Ali** ibn Abi Talib]

030-09-2-07118

3. This writer focused on his survival after being imprisoned on false evidence in his prison memoir *The Man Died*. This author wrote about the clash between Oba Danlola and the title dictator in his work *Kongi's Feast*. In another work by this man, Simon Pilkings causes a panic in the village of Oyo when he prevents Elesin from fulfilling his duty towards the alafin. He also wrote about Sidi, a beautiful girl lusted after by the village chief Baroka. For 10 points, name this first African winner of the Nobel Prize, a Nigerian playwright of *Death and the King's Horseman* and *The Lion and the Jewel*.

ANSWER: Akinwande Oluwole **Soyinka**

034-09-2-07119

4. This ruler faced opposition when he attempted to levy the ship money tax inland during peacetime. A list of grievances, the Grand Remonstrance, was presented to this monarch by John Pym. This king appointed William Laud as Archbishop of Canterbury. This man's disregard of the Petition of Right during the Eleven Years Tyranny eventually contributed to the outbreak of the Bishops War and another conflict. For 10 points, name this monarch who fought with parliament in the English Civil War, only to be defeated by the forces of Oliver Cromwell and beheaded.

ANSWER: **Charles I** of England, Ireland, and Scotland [prompt on **Charles**]

035-09-2-07120

5. This book ends with the protagonist dreaming about African lions. One character in this book fears that the Cleveland Indians will defeat the Yankees, but the protagonist reminds him that the Yankees have "the great DiMaggio." That character, Manolin, is an apprentice to the title character, who has gone eighty-four days without catching a fish. The title character, Santiago, battles with a marlin on the eighty-fifth day. For 10 points, name this novella by Ernest Hemingway.

ANSWER: *The **Old Man and the Sea***

024-09-2-07121

6. When "pellucidum" is appended to this word, it describes a brain structure that runs from the corpus callosum to the fornix. A defect of another structure with this name allows blood to pass from the left to right atrium. Another structure with this name can potentially deviate enough to cause abnormal breathing. For 10 points, give this term that comes from the Latin for "wall," which describes the divider between the two nostrils of the nose.

ANSWER: **septum**

003-09-2-07122

7. One of these conflicts was incited by the surprise at Meaux, which followed the Edict of St. Germain. One of the namesake figures of one war in this series was the Duke of Guise, one of the "Three Henrys." Catherine de Medici ordered one brutal occurrence during this series of conflicts. These conflicts were ended by Henry IV's conversion to Catholicism. For 10 points, name this series of 16th-century wars, which included the St. Bartholomew's Day Massacre, between Huguenots and Catholics.

ANSWER: French **Wars of Religion**

038-09-2-07123

8. Current lags voltage in these circuit components by ninety degrees. The potential energy stored in one of these devices is equal to "one-half current squared times" a namesake quantity. These devices create a reactance proportional to "2 pi times the frequency," causing them to resist the flow of alternating current. These devices often consist of a coiled wire, and Faraday's Law describes how electric current through one of these creates a magnetic field. For 10 points, name these devices which have a namesake property symbolized L and measured in Henries.

ANSWER: **inductors**

028-09-2-07124

9. This author imagined Satan as a three-faced demon chewing on the heads of Cassius, Brutus, and Judas Iscariot. In one work, this author described riding the back of Geryon to reach Malebolge and meeting the adulterous lovers Paolo and Francesca. In that work, this author is guided by Virgil and Beatrice through hell, purgatory, and heaven. For 10 points, name this medieval Italian poet who wrote the *Paradiso* and *Inferno* sections of his *The Divine Comedy*.

ANSWER: **Dante** Alighieri [or Dante **Alighieri**]

004-09-2-07125

10. Idmon joined this group although he knew it would lead to his own death. This group encountered the seer Phineus, whose food was eaten by Harpies until two members of this group, Calais and Zetes, drove them off. Heracles abandoned this group to search for Hylas, and Orpheus kept this group from being enticed by the sirens. Their leader, Jason, married Medea on their voyage back from Colchis. For 10 points, name this group of Greek adventurers, who set off in their namesake ship to find the Golden Fleece.

ANSWER: **Argonauts**

003-09-2-07126

11. In Tintoretto's version of this painting, fire flowing from a lamp in the upper left illuminates swirling spirits. Salvador Dali's version of this painting shows the central character blond, and features a transparent torso floating above the scene. This painting emerged from a twenty one year restoration in 1999. The central figure's head is the vanishing point for all the perspective lines in this painting, in which one of the thirteen figures holds a knife and two point at the same loaf of bread. For 10 points, name this Leonardo da Vinci work depicting the final meal of Jesus.

ANSWER: *The* **Last Supper**

015-09-2-07127

12. This author included his "Big Space" and "The King of Harlem" in a collection inspired by his visit to the United States, *The Poet in New York*. This man elegeized Ignacio Sánchez Mejías (ig-NAH-shee-oh SAHN-chez meh-HEE-ahs), a renowned matador, in his "Lament for the Death of a Bullfighter." One of his plays describe a period of enforced mourning in the title abode. In another of his plays, Leonardo and the Bridegroom kill each other under the full moon. For 10 points, what Spanish author of *The House of Bernarda Alba* and *Blood Wedding* was killed by Fascists in 1936?

ANSWER: Federico Garcia **Lorca**

019-09-2-07128

13. This body's necrosis due to blood loss from childbirth is known as Sheehan's syndrome. In developing embryos, part of this structure forms from Rathke's pouch, and it is located in a depression known as the sella turcica, which is found in the sphenoid bone. Herring bodies are found in the axons that connect this entity to the hypothalamus. It regulates the body's water content by releasing vasopressin from its posterior lobe. For 10 points, name this "master gland" that releases prolactin and sits at the base of the brain.

ANSWER: **pituitary** gland

026-09-2-07129

14. One short story by this author explains how Mrs. Sommers spends fifteen dollars. This author wrote a novel about Therese Lafirme's love for David Hosmer in Natchitoches. A short story by this author is about Louise's reaction when she discovers Brentley Mallard isn't actually dead. In addition to "A Pair of Silk Stockings," *At Fault*, and "Story of An Hour," this author wrote about a woman who has an affair with Alcée Arobin in another novel. In that novel by this author, the protagonist vacations at Grande Isle and loves Robert LeBrun. For 10 points, name this author who wrote about Edna Pontellier in *The Awakening*.

ANSWER: Kate **Chopin** [or Catherine **O'Flaherty**]

036-09-2-07130

15. Along with table salt, ammonia, and carbon dioxide, this compound is an input in the Solvay process. It is a byproduct of the Ostwald process used to make nitric acid, and this compound notably has explosive reactions with several pure alkali metals. Combustion of hydrocarbons produces carbon dioxide and this compound, which reacts with strong acids to form hydronium ions. For 10 points, name this compound sometimes jokingly referred to as "dihydrogen monoxide."

ANSWER: **water** [or **H2O**]

003-09-2-07131

1. The Dan River flows into this river in the Hulah Valley, and the Yarmouk River connects the Hauran Plateau to this river's watershed. A main source of this river is melting snow from Mount Hermon, and this river flows just west of the Golan Heights. This river plunges below sea level before reaching the Sea of Galilee and forming the border of the West Bank. For 10 points, name this river that flows into the Dead Sea, which separates Israel and a nation of this river's name.

ANSWER: **Jordan** River

036-09-2-07132

2. This author wrote "there is neither East nor West, Border, nor Breed, nor Birth / When two strong men stand face to face, tho' they come from the ends of the earth!" in a poem asserting "East is East, and West is West, and never the twain shall meet." This author wrote a poem about a British soldier who tells a water-carrier "you're a better man than I am," as well as several stories about the tiger Shere Khan and the wolf-child Mowgli. For 10 points, name this British author who wrote about India in "Gunga Din" and The Jungle Book.

ANSWER: Rudyard **Kipling**

004-09-2-07133

3. PSI+, one of these structures in yeast, may be evolutionarily beneficial. The creation of these entities is related to gene CD230, which is located on the short arm of chromosome 20. PrP becomes mutated in diseases related to these entities, and they can create tissue deposits that resemble amyloidosis (AM-ill-oy-DOSE-iss). They cause diseases like kuru, scrapie, and Creutzfeld-Jakob disease. For 10 points, name these misfolded proteins that can also cause "mad cow" disease.

ANSWER: **prions** [or **proteinaceous infectious agent**]

026-09-2-07134

4. This quantity is modeled for different groups substituted on a benzene ring via the Hammett equation. One measure for this quantity takes the average energy of a free atom's valence electrons and is named for Allen. A simple measure for this quantity is equal to the mean of first ionization energy and electron affinity, named for Mulliken, though it is more often measured on the Pauling scale, which gives fluorine a value of 3.98. For 10 points, give this quantity that represents the degree to which an atom or group attracts electron density.

ANSWER: **electronegativity**

022-09-2-07135

5. The written form of this language uses the letter combination "s z" to represent the English "s" sound. Because it is a Uralic language, it exhibits a phenomenon that is also characteristic of Turkish, vowel harmony. This language shares a group with Mansi, Khanty, and the Ob-Ugric languages within the Finno-Ugric family. This language is not Indo-European, though its speakers are normally surrounded by speakers of Germanic and Slavic languages in Central Europe. For 10 points, identify this language, which was the native tongue of Leo Szilard, Bela Bartok, and Franz Liszt.

ANSWER: **Hungarian** [or **Magyar**]

019-09-2-07136