

1. Bernat Dechepare wrote in the labortano dialect of this language. This language has a pidgin with Icelandic. The work of Sabino Arana updated this language. It is spoken in a namesake Autonomous Community. This language isolate is non-Indo-European, despite being spoken in a country that predominantly speaks Romance languages. For 10 points, name this language spoken in Northwestern Spain whose origins are still unclear.

ANSWER: **Basque** Language [or **Euskara**]

001-10-21-12101

2. The work of Cavalieri and Barrow provided the groundwork for this field of study. George Berkley attacked the central idea behind this subject saying "may we not call them the Ghosts of departed Quantities?" One pioneer of this field called it "the method of fluxions." One developer of this was Gottfried Leibniz. The other person who discovered this mathematical subject was Sir Isaac Newton. For 10 points, name this branch of mathematics involving the taking of integrals and derivatives.

ANSWER: infinitesimal **calculus** [prompt on **math**]

001-10-21-12102

3. One poem by this author asks that the bodies be piled "high at Austerlitz and Waterloo," and that the listener "let [it] work." This author describes the title entity as "looking over harbor and city," as it "comes in on little cat feet." Another poem by this author of "Grass" labels a city as "Stacker of Wheat" and "Hog Butcher for the world." For 10 points, name this American poet that wrote about "Fog" and detailed the Second City in "Chicago."

ANSWER: Carl **Sandburg**

002-10-21-12103

4. A similar action to this incident took place in Annapolis and involved merchants Thomas Williams and Anthony Stewart. It was precipitated after Governor Thomas Hutchinson refused to compromise with protesters. Immediately before this incident, people gathered in the Old South Meeting House to listen to the Sons of Liberty. It saw people board the *Dartmouth*, *Eleanor*, and *Beaver* while dressed as Mohawk Indians. For 10 points, name this 1773 incident in which patriots dumped a certain product into a New England harbor.

ANSWER: **Boston Tea Party**

052-10-21-12104

5. This author wrote a short story in which Sammy quits his job at the title store after three girls in bathing suits come in. This author of "A & P" wrote three novels about Anthony Bech. In another of his works, a Magi-Peel Salesman cheats on his wife, Janice, with Ruth Leonard. He wrote four books about the former basketball star Harry Angstrom, in two of which Harry "is Rich" and is "at Rest." For 10 points, name this author of the Rabbit series.

ANSWER: John **Updike**

080-10-21-12105

6. One member of this family, Salvestro, led the Ciompi revolt. Another member of this family was the target of the Pazzi conspiracy. Pope Leo X was a member of this family, some of whose members were the Grand Dukes of Tuscany. One member of this family patronized Botticelli and other artists during the Italian Renaissance; that member was Lorenzo the Magnificent. For 10 points, name this powerful family of bankers that had a dynasty started by Cosimo in medieval Florence.

ANSWER: the **Medici**

080-10-21-12106

7. This man served as an instructor to Queen Christina of Sweden and drew a wrote a code of regulations for the Swedish Academy of Sciences. This man also wrote a work that attempted to describe harmony in mathematical terms, his *Compendium Musicae*. The possibility that he was being constantly deceived by an evil genius is considered in this man's *Meditations on First Philosophy*. For 10 points, name this French philosopher who wrote *Discourse on Method* and posited, "I think, therefore I am."

ANSWER: Rene **Descartes**

030-10-21-12107

8. One composer from this nation wrote the ballets *Raymonda* and *The Seasons*. Another composer from this nation wrote piano sonatas such as "White Mass" and "Black Mass" and was inspired by his synaesthesia to write *Prometheus: Poem of Fire*. A better known composer from this nation wrote a sixth symphony known as *Pathetique*, as well as *Marche Slav*. For 10 points, name this nation home to the composers Alexander Glazunov, Alexander Scriabin, and Peter Tchaikovsky.

ANSWER: **Russia**

040-10-21-12108

9. The *Records of the Grand Historian* was written during this dynasty. This dynasty's extent of control was increased by the Emperor Wudi. This dynasty was temporarily overthrown by Wang Mang. Buddhism first reached China during this dynasty. It was founded by Liu Bang. The Yellow Turban Rebellion was directed against it. After this dynasty was the Three Kingdoms period and this dynasty succeeded the Qin. For 10 points, name this Chinese dynasty than began in 206 B.C. and ultimately ended in the third century A.D.

ANSWER: **Han** Dynasty

001-10-21-12109

10. In SI units and under standard conditions for air, this is equal to 20.05 times the square root of the temperature, but usually an approximation using a reference plus 0.6 times the temperature is used. This is equal to the square root of the ratio of bulk modulus to density. When this is exceeded a shock wave is created. At sea level this about 761 miles per hour. The ratio of an objects velocity to this is called the Mach number. For 10 points, name this quantity which is the rate at which an acoustic wave travels.

ANSWER: **speed of sound** [or **velocity of sound**]

001-10-21-12110

11. In November of 2010, a retired electrician was arrested shortly after his collection of 271 of this artist's paintings was found to be authentic. This painter depicted a naked couple in *La Vie* (VEE) and a cross-legged, hunched figure holding an instrument in *The Old Guitarist*, both painted during his Blue Period. A disconnected horse is at the center of another work painted in response to the bombing of the titular Basque city. 1937's *Guernica* was painted by, for 10 points, what Spanish artist who worked with Georges Braque to pioneer the Cubist art movement?

ANSWER: Pablo Ruiz **Picasso**

023-10-21-12111

12. This country's national hero resisted control by the Ottoman Empire at the Battle of Torvioll, though he did not participate in the battle of Kosovo Field. This country, which was home to Skanderbeg, was later ruled by a king who took power from Fan Noli. This nation, which was ruled by King Zog, was closely allied with Maoist China before becoming an isolated communist state under dictator Enver Hoxha (HOE-zhuh). For 10 points, name this Balkan nation ruled from its capital, Tirana.

ANSWER: Republic of **Albania** [or **Shqiperia**; or Republika e **Shqiperise**]

026-10-21-12112

13. A new class of these are known as pebble bed ones. The majority of these use a pressurized water design and an emergency shutdown of one is called a SCRAM. The United States no longer permits breeder ones. An important part of these are control rods and often they will have hyperbolic cooling towers. The waste from one of these is radioactive as is the fuel. For 10 points, what type of reactor uses the heat generated by a controlled chain reaction involving elements like uranium or plutonium to provide electrical or mechanical power.

ANSWER: **nuclear** fission reactor [or **nuclear** fission power plant]

001-10-21-12113

14. This player scored 44 points in a loss to the Knicks to set a franchise rookie record. As a child this player played on the same AAU team as Rams Quarterback Sam Bradford. In January 2011, this player was confirmed to be participating in the Slam Dunk contest over the All-Star Break. A knee injury caused this player to miss his rookie season after being drafted number one overall out of Oklahoma. For 10 points, name this Los Angeles Clippers forward who has made a name for himself in the 2010-11 season with his prolific dunking.

ANSWER: Blake **Griffin**

002-10-21-12114

15. This president sent federal troops into Baltimore and Pittsburgh to put down the "Great Railroad Strike." This man's First Lady was known as "Lemonade Lucy" for her support of temperance. Despite his veto, the Bland-Allison Act was passed during his presidency, as were bills weakening the Force Acts passed to crack down the Ku Klux Klan. During his only presidential election, he actually received less electoral and popular votes than opponent Samuel Tilden. For 10 points, name this president who took office by promising to end Reconstruction in the controversial "Compromise of 1877."

ANSWER: Rutherford Birchard **Hayes**

052-10-21-12115

1A. What anthropologist compared “guilt” and “shame” cultures in her study of Japan and its people, *The Chrysanthemum and the Sword*?

ANSWER: Ruth **Benedict**

1B. What special adviser on Pakistan and Afghanistan, U.S. Ambassador to the UN from 1999 to 2001, and broker of the 1995 Dayton Peace Accords died in December 2010?

ANSWER: Richard **Holbrooke**

2A. What world religion had the concepts of the Four Noble Truths and the Eightfold Path created by its founder?

ANSWER: **Buddhism**

2B. Name the Byzantine emperor and husband of Theodora who promulgated a new law code and used Belisarius to put down the Nika revolt.

ANSWER: **Justinian** I [or Flavius Petrus Sabbatius **Justinianus**]

3A. This is a 10-second calculation question. What is $x + i$ multiplied by its conjugate?

ANSWER: **$x^2 + 1$**

3B. This is a 10-second computation question. If a cube has a side length of x and volume y , what is the side length of a cube with volume $2y$?

ANSWER: **$x * \text{cube root of } 2$** [or **$x * 2^{(1/3)}$**]

4A. Brenda Strong voices the deceased narrator Mary Alice on what ABC drama centering on the residents of Wisteria Lane?

ANSWER: **Desperate Housewives**

4B. What star in the constellation Carina is the second brightest star in the night sky?

ANSWER: **Canopus**

5A. This is a 20-second calculation question. What are the two values of k does $k^2 - 11k + 18$ equal 0?

ANSWER: $k = \underline{2}$ and $k = \underline{9}$

5B. This is a 20-second calculation question. What is the root mean square of $\{1, 1, 2\}$?

ANSWER: **square root of 2**

6A. What 1676 insurrection of Virginia farmers, named for the man who led the campaign, attacked Jamestown to protest the Governor's refusal to act on claims of Indian attacks in the frontier?

ANSWER: **Bacon's Rebellion**

6B. Name the phase transition of going directly from a solid to a gas.

ANSWER: **sublimation**

7A. This is a 30-second calculation question. How many ways can a group of 4 elements be selected from a set of 10 elements without repetition?

ANSWER: **210**

7B. This is a 30-second computation question. What is the amplitude of $2\sin(x) + 3\cos(x)$?

ANSWER: **square root of 13**

8A. What laboratory technique invented by Kary Mullis amplifies DNA using repeated heat cycling and a namesake enzyme?

ANSWER: **PCR** [or **polymerase chain reaction**]

8B. Who is the Norwegian composer of the *Peer Gynt Suite*, which includes the memorable song "In the Hall of the Mountain King"?

ANSWER: Edvard **Grieg**

9A. Name the band behind the song "Particle Man" that also sang the theme for FOX's comedy *Malcolm in the Middle*.

ANSWER: **They Might Be Giants**

9B. What high-kicking dance associated with chorus lines is often danced to "The Infernal Galop," a tune from Jacques Offenbach's opera *Orpheus in the Underworld*?

ANSWER: **can-can**

10A. What is the capital of Laos?

ANSWER: **Vientiane**

10B. Name the term describes shapes that do not contain all of the line segments connecting arbitrary points in the shape.

ANSWER: **concave**

1. This country's earliest known poetry is collected in its *Book of Songs*, one of its "Five Classics." This country's medieval poetry includes many *lu shi* written by Tu Fu. A classic novel from this country describes how the Monkey King helps a monk travel to India to retrieve some scriptures, and is titled *Journey to the West*. For 10 points, name this country whose classic novels were written during its Ming Dynasty.

ANSWER: **China**

004-10-21-12117

2. The Maxwell-Stefan model of this applies for multicomponent systems. It is used to separate isotopes of uranium in gaseous compounds. This process is described by Fick's laws. This arises from the statistics of random particle movement and in the context of water and a semipermeable membrane it is called osmosis. For 10 points, name this movement from high concentration to low concentration.

ANSWER: **diffusion**

001-10-21-12118

3. This man wrote, "All business sagacity reduces itself in the last analysis to judicious use of sabotage," in his essay, "The Engineers and the Price System." He warned that the "machine process" resulted in industry doing largely useless work in *The Theory of Business Enterprise*. Another work by this man uses Darwinian explanations for why the rich show off their wealth. For 10 points, name this economist who coined the term "conspicuous consumption" in *The Theory of the Leisure Class*.

ANSWER: Thorstein **Veblen**

080-10-21-12119

4. Its second period was dominated by Diego Lainez, and its third session was influenced by Charles Borromeo. This event excluded the Prayer of Manasseh and the Third and Fourth Books of the Maccabees as canon but declared most of the Vulgate as canon. Its first session accepted the Nicene Creed as the basis of Christian faith and rejected justification by faith alone. It was convened by Paul III in 1545. For 10 points, name this council of the Catholic Church that sparked the Counter Reformation.

ANSWER: Council of **Trent**

030-10-21-12120

5. A gunfight between Scratchy and Jack is prevented by Jack not having a gun in this author's "The Bride Comes to Yellow Sky." This author wrote a novella about the oldest child of the Johnson family being forced out of home and her eventual death. Another work by this author is titled for an injury given by a retreating man's rifle to the head of Henry Fleming. For 10 points, name this American author of *Maggie: A Girl of the Streets* and *The Red Badge of Courage*.

ANSWER: Stephen **Crane**

002-10-21-12121

6. The Shannon capacity has units of this per second. Twiddling refers to manipulation of them and flags are composed of them. Historically ASCII contained a parity one of these for error detection. Operations such as logical shift and boolean OR are known as this "wise" operations. Raster images are usually referred to as a pix or this map. For 10 points, name this signal binary digit, eight of which make up a byte.

ANSWER: **bits**

001-10-21-12122

7. This man created, along with Luis Bunuel the films “The Golden Age,” and “An Andalusian Dog,” and created the logo for Chupa Chups. This artist depicted a set of three birds giving a deceptive reflection in a pool of water in his “Swans Reflecting Elephants.” This artist depicted the “disintegration” of another of his works, and that painting features a series of ants as well as multiple misshapen clocks. For 10 points, name this surrealist painter of “The Disintegration of Memory.”

ANSWER: Salvador **Dali**

002-10-21-12123

8. One short story by this author sees a lawyer agree to spend fifteen years in solitary confinement in exchange for a large sum of money. In addition to “The Bet,” this author wrote a play which sees Lopakhin buy the title estate and ends with the sound of axes cutting down trees. This author insisted that that play, like all of his others, was a comedy. Another play by this author features Konstantin trying to give a gift of a shot bird to Nina. For 10 points, name this Russian playwright of *The Cherry Orchard* and *The Seagull*.

ANSWER: Anton **Chekhov**

002-10-21-12124

9. This phenomenon will be cold or solid if it results from the Bergeron Process. Orographic lift explains how this phenomenon can occur at higher elevations but not lower. In the Köppen climate scheme, differences in this phenomenon are largely responsible for the differentiation of Group A climates. Mountain ranges cause this phenomenon's namesake "shadow," which leads to the formation of deserts. For 10 points, name this liquid precipitation that falls from the sky.

ANSWER: **rain** [prompt on **precipitation**]

026-10-21-12125

10. Under an alias, this man played water polo on a universities team while earning his master’s in geography at the University of St. Andrew’s. Earlier, paparazzi vowed to leave this man alone during his studies at Eton, which broke family tradition. This man’s brother was once photographed at a costume party wearing a swastika. Despite fears due to his status, this man extended his time in the Royal Air Forces while working as a search and rescue helicopter pilot. For 10 points, name this elder son of Charles and Diana who is currently engaged to Kate Middleton.

ANSWER: Prince **William**

052-10-21-12126

11. One architect from this country designed the Café de Unie and the Shell Building, while another architect from here designed a house with changeable rooms, the Schröder House. Those men, J.J.P. Oud and Gerrit Rietveld, were members of a movement founded by Theo van Doesburg that emphasized primary colors and was sometimes called Neoplacticism. That movement, De Stijl (STEEJ), was also associated with the painter Piet Mondrian and the creator of *The Potato Eaters* and *Starry Night*. For 10 points, name this country, the birthplace of Vincent van Gogh.

ANSWER: The **Netherlands** [accept **Holland**]

083-10-21-12127

12. William Still is said to be the father of this institution, and he wrote a memoir about his experiences working for it. Some historians claim it utilized quilts as part of a code system. This institution used the song "Follow the Drinking Gourd," a reference to the Big Dipper, as a guide for directions. Many people who utilized this institution ended up in Toronto and Windsor, Ontario. Workers in this institution included Sojourner Truth and Harriet Tubman. For 10 points, name this secret institution which saw "conductors" guide runaway slaves to freedom.

ANSWER: **Underground Railroad**

052-10-21-12128

13. A man dressed in pink and blue points to himself in this painting, which is set in a room with three rectangular windows in the background. Located across from a Donato da Montorfano work in the Santa Maria della Grazie, this painting's left-hand side shows a bald man raising both his hands and a mysterious knife poking out between two figures. A V-shaped pattern is formed by the central figure and an effeminate looking St. John. For 10 points, name this work by Leonardo da Vinci which depicts Christ's last meal.

ANSWER: *The **Last Supper** [or *Il **Cenacolo** or *L'**Ultima Cena**]***

083-10-21-12129

14. These diagrams can be used to graphically show expected three-to-one and nine-to-three-to-three-to one ratios. These diagrams typically show combinations of letters that are capitalized for dominant and lower-case for recessive. They do not accurately model epistasis, linkage, incomplete dominance, or other situations where Mendel's law of independent assortment do not hold. For 10 points, name this diagram that shows the possible outcomes of genetics breeding experiments.

ANSWER: **Punnett square**

026-10-21-12130

15. A bridge over this body of water connects the mainland to Kent Island. The majority of American rockfish spawn in this body of water. The Patuxent and Rappahannock rivers flow into this body of water, whose vast watershed reaches Pennsylvania, New York, and West Virginia. Its waters are responsible for the strong seafood industry on the Eastern Shore and Baltimore. For 10 points, name this largest estuary in the United States, a bay off the coast of Virginia and Maryland.

ANSWER: **Chesapeake Bay**

004-10-21-12131

1. One of this man's novels ends with the protagonist talking to his friend, Charles Deslauriers. This author wrote a novel about Frederic Moreau's love for an older woman, Madame Arnoux. This author of *A Sentimental Education* wrote another novel about a woman who takes arsenic, after which her affairs with Leon and Rodolphe become known to her husband, a pathetic country doctor. For 10 points, name this French author of *Madame Bovary*.

ANSWER: Gustave **Flaubert**

080-10-21-12132

2. One drug regimen often prescribed to combat this condition is known as CA and consists of cyclophosphamide and adriamycin. When this condition presents with an overexpression of HER2/neu, monoclonal antibodies may be used for treatment. Though not found in bones, Paget's disease may be a symptom of this condition. This condition is linked to expression of the BCRA genes, and advanced cases may require a mastectomy. For 10 points, name this malignant neoplasm that is detected via regular mammograms.

ANSWER: **breast cancer** [prompt on **cancer**; or malignant **breast neoplasm**]

026-10-21-12133

3. Ambrose Bierce included satirical examples of these writings such as "The Moral Principle and the Material Interest" in his collection of "fantastic" ones. Older examples of these works include one in which a tree boasts of its size to a reed, only to be toppled by a storm, and one in which a fox steals a piece of cheese by flattering a crow. For 10 points, name these short tales with a moral, which were famously written by Aesop.

ANSWER: **fables**

004-10-21-12134

4. In one of this author's novels, Doctor Archie watches Thea Kronborg's opera performance. In addition to *The Song of the Lark*, this author wrote a novel in which Frank shoots the protagonist's brother, Emil, for having an affair with his wife Marie. Besides that novel about Alexandra Bergson, she wrote a novel in which Jim Burden befriends the title Bohemian immigrant on the prairies. For 10 points, name this author of *O Pioneers!* and *My Antonia*.

ANSWER: Willa **Cather**

080-10-21-12135

5. If a problem is polynomial time reducible to three sat, then then that problem has this distinction in regards to a particular set. This is measured by the Vickers. NP complete problems are problems in NP that have that encapsulate this notion for NP. Water with this property has lots high concentration of magnesium and calcium ions. The Mohs scale measures this. For 10 points, name this term which is the opposite of softness.

ANSWER: **hardness** [or NP-**hard** before Vickers]

001-10-21-12136

C. A. R. Hoare invented this algorithm that uses pivot values to perform its namesake process in a fast manner.

ANSWER: **quicksort**

001-10-21-12137