



1. One leader of this nation, Buenaventura Baez, asked the United States to annex this nation, but the U.S. Senate decided against it by one vote. This nation was led to independence by Juan Pablo Duarte. One president of this nation ordered the massacre of thousands of immigrants living on this country's border in the Parsley Massacre. That ruler of this country was Rafael Trujillo. For 10 points, name this Caribbean nation that shares the island of Hispaniola with Haiti.

ANSWER: **Dominican** Republic [or Republica **Dominicana**]

030-12-56-07101

2. In general relativity, a geodesic described by this term implies a curved manifold. All frames of reference described by this term are in constant motion relative to one another. The rotational analog of mass is known as the moment of *this*. Isaac Newton defined it as an object maintaining a constant velocity in the absence of net external forces in his First Law of Motion. For 10 points, name this resistance to change in motion measured by mass.

ANSWER: **inertial**

147-12-56-07102

3. In this novel, Clara Barley cares for her father, who suffers from gout. Its protagonist is helped by the lawyer Jaggers, who employs the clerk Wemmick. That protagonist of this novel is saved from the villainous Orlick by his friend Herbert Pocket. One of its characters preserves her cake and wears her old wedding dress after being jilted at the altar. The protagonist of this novel is secretly given money by the ex-convict Abel Magwitch, and falls in love with Estella, who is raised by Miss Havisham. For 10 points, name this Charles Dickens novel about Pip.

ANSWER: **Great Expectations**

015-12-56-07103

4. This figure's death coincided with the birth of the Iberian king Chrysaor and the winged horse Pegasus. This figure was unfairly punished after Poseidon raped her in the temple of Athena. Stheno and Euryale were this figure's immortal sisters, and she was killed by a man wearing Hades's helmet and Hermes's winged sandals. This figure's head was attached to Athena's shield due to its ability to turn people to stone. For 10 points, name this snake-haired Gorgon slain by Perseus.

ANSWER: **Medusa**

014-12-56-07104

5. This character is first described as "disdaining fortune, with his brandished steel, which smoked with bloody execution" by a wounded sergeant. This character declares that "present fears are less than horrible imaginings," and as his downfall approaches, he gives a speech calling life "a tale told by an idiot, full of sound and fury, signifying nothing." This character, who cannot be killed by anyone "of woman born," is slain by Macduff. For 10 points, name this Scottish title character of a Shakespearean tragedy.

ANSWER: **Macbeth**

014-12-56-07105

6. The notation for these devices uses a double bar to separate the two main components and single bar to separate different phases. For these devices, the change in Gibbs free energy equals the product of Faraday's constant, the electron transfer number, and its associated potential. These devices use a salt bridge to connect two solutions. These devices employ two half-reactions on two different electrodes to generate a current between them. For 10 points, name these devices which use an electromotive force to drive a chemical reaction.

ANSWER: **galvanic cell** [or **voltaic cell**; or **electrochemical cell**]

014-12-56-07106

7. The narrator of this work recovers the bones of a man who was killed in a dispute over some hens. The Eldorado Exploring Expedition arrives instead of expected rivets in this work. The narrator of this work discovers a book on seamanship with notes written in Russian along with firewood for his steamer. A trader in this work with a fiancée in Belgium dies after exclaiming, "The horror! The horror!" For 10 points, name this novella in which Marlow travels down the Congo River in search of Kurtz, a work of Joseph Conrad.

ANSWER: **Heart of Darkness**

105-12-56-07107

8. Cape Barren Island lies off the shore of this country, whose Wellesley Islands lie in the Gulf of Carpentaria. Deserts in this country include Tanami, Simpson, and Gibson, and its mountain ranges include Hamersley and Macdonnell. The Nullarbor Plain lies in this country that is home to Lake Eyre. The Torres Strait separates this country from Papua New Guinea. For 10 points, name this country that is home to Ayers Rock and the cities of Perth, Brisbane, and Melbourne.

ANSWER: **Australia**

124-12-56-07108

9. One poem by this author describes the "low stir of leaves, and dip of oars, and lapsing waves on quiet shores." He wrote about a farm girl and judge who never voice their love for one another in a poem that ends, "For of all sad words of tongue or pen, the saddest are these: it might have been!" An old woman says, "Shoot, if you must, this old gray head, but spare your country's flag" in his poem "Barbara Frietchie." For 10 points, name this New England poet who wrote "Maud Muller" and *Snow-Bound*.

ANSWER: John Greenleaf **Whittier**

020-12-56-07109

10. In California, this process is performed by a fourteen-member "Citizens Commission." In two cases of *Perry v. Perez* and the case *Perry v. Davis*, the Supreme Court ordered Texas to continue this process. In Virginia, Democrats claimed that SB455, concerning this process, violated the Voting Rights Act. Many states failed to complete this process within one year of the release of the 2010 Census. For 10 points, name this process in which states redraw voting maps.

ANSWER: **redistricting**

003-12-56-07110

11. In one of his works, Randolph Driblette directs a production of a play by Richard Wharfinger, *The Courier's Tragedy*. One of his novels involves the search for the "Schwarzgerat" and an object with serial number 00000. In another work, Pierce Inverarity's former lover discovers an ancient conflict between Thurn und Taxis and Trystero, two mail-delivery companies. For 10 points, name this postmodern American author who created Oedipa Maas and Tyrone Slothrop in *The Crying of Lot 49* and *Gravity's Rainbow*.

ANSWER: Thomas **Pynchon**

132-12-56-07111

12. In Edvard Munch's (MOONK) painting of this scene, the central figure has flowing black hair and is seemingly at the point of climax. Two ugly children with fangs and bird-like wings appear in another version of this scene by Andrea del Sarto. A tiny figure on the bottom right points to a tall lone column in another rendition of this scene. Raphael painted a version "of the Goldfinch," while Parmigianino (PAR-ma-juh-NEE-no) painted the one "with a long neck." For 10 points, name these depictions of the Virgin Mary.

ANSWER: **Madonna** and Child [or **Virgin** and Child until mentioned; accept longer answers that contain the words **Madonna** or **Virgin**]

020-12-56-07112

13. In Philip Roth's *Portnoy's Complaint*, Portnoy witnesses Mary Jane Reed eating one of these items during a sexual encounter, leading to Mary Jane's nickname. In a novel whose title begins with this word, the missionary Craig family adopts the free-spirited Tabitha Plant. That novel, by Claude McKay, is titled for this kind of "bottom." In a short story with this fruit in the title, Muriel looks for a missing book of German poetry before Sybil Carpenter spots an animal named for this food. For 10 points, Seymour Glass shoots himself at the end of a J. D. Salinger story named for what kind of fish?

ANSWER: **banana**

019-12-56-07113

14. There is no set with a cardinality between that of this set and that of the reals according to Cantor's continuum hypothesis. Complex numbers whose real and imaginary part are both these numbers are the Gaussian type. The fundamental theorem of arithmetic concerns the representation of the positive form of these numbers. Rational numbers can be expressed as quotients of these numbers. For 10 points, name this set of numbers that consists of the zero and the natural numbers and their negatives.

ANSWER: **integers**

066-12-56-07114

15. One of these phenomena was observed in a group of Cornell undergraduates studied by Dunning and Kruger. Edward Thorndike did research on another phenomenon of this kind and named it the halo effect. Another one of them is exhibited by people who believe that unfortunate people deserve their fates because the world is fundamentally just. People only accept evidence that supports what they believe in the "confirmation" type of this phenomenon. For 10 points, name these irrational distortions of the truth that ruin impartiality.

ANSWER: cognitive **biases**

020-12-56-07115



1A. This is a 10-second calculation question. What is the population variance of the set 40, 30, 5?

ANSWER: **650/3** [or **216** and **2/3**; or **216.666...**; or **216.6** repeating; or **216.67**]

1B. This is a 10-second calculation question. What is the surface area of a cylinder with diameter 4 and height 3? Express your answer in terms of pi.

ANSWER: **20** pi

2A. What rapidly rotating celestial objects are made up of the neutral particles found alongside protons in the atomic nucleus?

ANSWER: **neutron** stars

2B. The joule is the SI unit of what product of force and the distance over which it acts?

ANSWER: **work**

3A. What religious figure is said to have been taunted by both the Wandering Jew and the Impenitent Thief?

ANSWER: **Jesus** Christ [or **Christ**; or **Jesus** of Nazareth; or obvious equivalents]

3B. What programming language was created by Dennis Ritchie and has an object-oriented successor that suffixes this language's name with plus plus?

ANSWER: **C**

4A. This is a 20-second calculation question. Solve for x in $x^2 + 28x = 128$.

ANSWER: x = **4** and x = **-32** [do not accept partial answers]

4B. This is a 20-second calculation question. In simplest form, what is the length of the diagonal of a cube with side length 2?

ANSWER: **2** times the square **root** of **3** units

5A. What American playwright wrote about the Gibbs and Webb families of Grover's Corners in *Our Town*?

ANSWER: Thornton Niven **Wilder**

5B. What feathered-serpent Aztec deity feuded with his brother Tezcatlipoca (tez-COT-lee-POE-kuh)?

ANSWER: **Quetzalcoatl** (KET-zal-co-UGHT-al)

6A. Which NFL team failed to capitalize on their 15-1 season when they lost to the New York Giants in their 2012 divisional playoff game?

ANSWER: **Green Bay** Packers [or Green Bay **Packers**]

6B. Sodium turns yellow in what chemistry procedure in which metals are detected through the application of heat?

ANSWER: **flame test**

7A. What language uses the copula "desu" (DESS) and uses borrowed characters such as "kanji" to go with its native "kana"?

ANSWER: **Japanese** [or **Nihongo**]

7B. Which poet wrote the verse novel *Aurora Leigh* and included a sonnet beginning, "How do I love thee?" in her *Sonnets from the Portuguese*?

ANSWER: **Elizabeth Barrett** **Browning**

8A. What actor voiced the title character in *Megamind* and the Man in the Yellow Hat in *Curious George*?

ANSWER: Will **Ferrell**

8B. Mohamed El-Baradei has dropped out of what nation's presidential race, in protest of its military government?

ANSWER: Arab Republic of **Egypt**

9A. This is a 30-second calculation question. Solve for all variables in the system of equations $x + 2y = z$; $3x - 18y = 3$; $x + y + z = 1$.

ANSWER: **$x = 3/5$; $y = -1/15$; $z = 7/15$** [or **$3/5$; $-1/15$; $7/15$** ; do not accept alternate answer in a different order]

9B. This is a 30-second calculation question. What is the probability that the sum of three fair dice is 5 given that the first die is a 1?

ANSWER: **$1/12$**

10A. Aesop was a master of what genre of short morality tale?

ANSWER: **fables**

10B. Lightning is the protagonist of what game in which the world of Cocoon implements the Purge against citizens who may have come in contact with the Fal'cie?

ANSWER: ***Final Fantasy XIII*** [do not accept or prompt on "Final Fantasy"]



1. This compound is the focus of the Vostok (VAW-stawk) record. The concentration of this compound is graphed on the Keeling curve. This compound is suddenly released from the bottom of a lake in limnic eruptions. The uptake of this compound by the ocean can prevent calcification due to a process known as ocean acidification. Variants of the Kraft process are one proposed method of sequestering this compound. For 10 points, name this greenhouse gas whose concentration shows a very strong correspondence with temperature.

ANSWER: carbon dioxide

066-12-56-07117

2. One of his operas sees Ninetta saved from execution when the theft of a spoon is revealed to be the work of the title animal. In another work by this composer of *The Thieving Magpie*, the title character sings an aria telling Jemmy not to move, and the overture features an English horn solo based on a *ranz des vaches* (RAWN-day-VASH). Another of his title characters sings "Largo al factotum" and helps Count Almaviva win the hand of Rosina. For 10 points, name this composer of *William Tell* and *The Barber of Seville*.

ANSWER: Gioachino Antonio Rossini

142-12-56-07118

3. Some members of this phylum employ an olfactory organ called an osphradium, and the genus *Architeuthis* ("are"-kih-TOO-tiss) in this phylum includes the largest invertebrates in the world. A tooth-covered radula is incorporated in the digestive system of some members of this phylum such as solenogasters. The bodies of members of this phylum are covered by a soft mantle, and this phylum encompasses gastropods and cephalopods. For 10 points, name this phylum of marine creatures including clams, squids, and octopi.

ANSWER: Mollusca [or mollusks]

014-12-56-07119

4. Alexander Shelepin was involved in the coup against this man. This politician started the Virgin Lands Campaign to make agricultural use of the steppe. He gave the Secret Speech in which he criticized the personality cult of his predecessor. This man led his nation during the Cuban Missile Crisis. In a famous incident, he allegedly banged his shoe on the table at the UN General Assembly. For 10 points, name this Soviet premier who came to power after Stalin.

ANSWER: Nikita Sergeyevich Khrushchev

127-12-56-07120

5. Some defects in the products of this process are caused by insufficient de-methylation of the chromatin of those products. This process is simpler with plants than with animals due to the prevalence of adult cells that remain totipotent (TOE-tee-PO-tent). In one approach to this process, an egg cell is enucleated and injected with a somatic cell nucleus, forming an undifferentiated cell. The use of embryonic stem cells in this process is controversial. For 10 points, name the process of copying a gene or organism, which created Dolly the sheep.

ANSWER: cloning

132-12-56-07121

6. One pope with this name suspended *Regnans in Excelsis*, which had excommunicated Elizabeth I. Another pope with this name excommunicated a king a second time after the king did penance before him at Canossa. That pope of this name was opposed by Henry IV during the Investiture Controversy. The one who first suggested that Mary Magdalene was a prostitute was known as "the Great." For 10 points, give the shared name of these popes who also devised a calendar and a chant.

ANSWER: **Gregory** [or **Gregory I**; or **Gregory VII**; or **Gregory XIII**; or **Gregory the Great**]

020-12-56-07122

7. One subclass of this phylum is the siphonophores, one member of which is the Portuguese Man o' War. Another poisonous member of this phylum is the sea wasp, *C. fleckeri*. Subphyla of this phylum include Hydrozoa and Cubozoa, and many members of this phylum have poisonous cells called nematocysts. Members of this phylum go through a life cycle involving asexual polyps and sexual medusae. For 10 points, identify this phylum, members of which include corals and jellyfish.

ANSWER: **cnidarians**

126-12-56-07123

8. Due to replacement workers using a typewriter to cover for a typesetter's strike, the area under this statement contains several typos covered over with the letter X and five lines of type set upside-down. A photo of this statement shows one man it refers to smiling while holding it at a train stop in St. Louis. The blunder of printing this headline led to George Gallup re-assessing his polling methods. For 10 points, give this inaccurate *Chicago Daily Tribune* headline from 1948, which got the results of the Presidential election wrong.

ANSWER: "**Dewey Defeats Truman**"

019-12-56-07124

9. This compound was first isolated by Albert Szent-Gyorgyi (sent-gee-YOR-gee), for which he won the 1937 Nobel Prize in Physiology or Medicine. James Lind's administration of this compound to his patients is considered one of the first controlled experiments. This compound's deficiency can lead to spotted skin and spongy gums. A lack of this vitamin often harmed sailors by causing scurvy, and Linus Pauling recommended consuming large amounts of it to prevent colds. For 10 points, name this water-soluble vitamin found in many citrus fruits.

ANSWER: Vitamin **C** [or **ascorbic acid**; or **ascorbate**]

132-12-56-07125

10. The largest two islands that surround this country are Nosy Be and Nosy Boraha. A series of man-made and natural lakes on this country's eastern coast are known as the Canal des Pangalanes (pon-guh-LAHN). The national language of this country is Malagasy, which is spoken by the Merina and Bara ethnic groups. This country is home to a large population of lemurs and is separated from the mainland by the Mozambique Channel. For 10 points, name this largest island in Africa.

ANSWER: **Madagascar**

149-12-56-07126

11. The Six Companies lobbied on this group's behalf during deliberation of the Burlingame Treaty. Initially, this group had numerous bachelor societies because their women were not allowed to join them. These were the first foreign laborers on sugar plantations in Hawaii. Prior to being excluded from the United States in 1882, many of them were hired by Central Pacific to work on the Transcontinental Railroad. Angel Island processed, for 10 points, immigrants of what ethnicity, who developed a large ethnic community in San Francisco?

ANSWER: **Chinese**-Americans [or **Chinese immigrants**]

020-12-56-07127

12. This man inspired a later work by Grieg with his Piano Concerto in A Minor. He used a recurring A-S-C-H motif in the different movements of his *Carnaval*, two of which depict his contrasting aspects, Florestan and Eusebius. He lost the ability to play the piano well after his right hand was injured, and he probably died of syphilis. His pieces include *Scenes from Childhood* and the *Rhenish Symphony*. For 10 points, name this Romantic composer, who married Clara Wieck.

ANSWER: Robert **Schumann**

080-12-56-07128

13. This artist painted a work showing a woman holding a cittern while she receives the title *Love Letter*. One work by this painter shows a representation of the Muse Clio in front of a map of the Netherlands and represents *The Art of Painting*. Another of his paintings shows a female wearing a brown shirt and a blue and gold headdress. For 10 points, name this artist of *Girl with a Pearl Earring*, a Dutch artist who depicted his hometown in *View of Delft*.

ANSWER: Jan **Vermeer** or Johannes **Vermeer** or Johan **Vermeer**

088-12-56-07129

14. Cult figure Darius McCollum has been arrested several dozen times for performing unauthorized work within this system. This system originated with a pneumatic tube built by Alfred Beach, decades before the IRT and BRT merged to create its present form. In the 1980s, a common scam on this system was the use of cheaper but physically similar Connecticut Turnpike tokens to enter, leading to the "Token War." The 438 stations in this network are almost as many as all other American underground transport systems combined. For 10 points, identify this transportation system, which operates trains on the BMT Broadway Line in Manhattan.

ANSWER: the **New York** City **subway** system

019-12-56-07130

15. This person gained notability as a congressman for a speech opposing a wool tariff. He was called to the stand during a case he prosecuted about a violation of the Butler Act. In one speech, he supported bimetallism by declaring "you shall not crucify mankind upon" the title object. This Secretary of State under Woodrow Wilson argued against Clarence Darrow in the Scopes Monkey Trial and delivered the "Cross of Gold" speech. For 10 points, name this Democrat who lost presidential elections in 1896, 1900, and 1908.

ANSWER: William Jennings **Bryan**

132-12-56-07131



1. This man was sent as a Democratic convention delegate in 1843, where his speech-giving prowess resulted in Polk and Dallas using him as an elector the next year. Other presidential connections include his three month marriage to Sarah Knox Taylor, the daughter of Zachary Taylor. This man also served in Pierce's cabinet as Secretary of War four years before taking a higher office. For 10 points, name this only President of the Confederate States of America.

ANSWER: Jefferson **Davis**

147-12-56-07132

2. According to Catalan's conjecture, this is the smaller of the two consecutive numbers formed by exponentiation. Gell-Mann's (GEL-mahns) classification system for baryons (BAH-ree-yohns) and mesons is named after this number. One allotrope of sulfur is a cyclic molecule with this many sulfur atoms. This is also the number of hydrogen atoms in glycerol (GLIH-suh-roll) and propanol. A cube has this many vertices. For 10 points, name this number that is the atomic number of oxygen and the number of valence electrons specified by the octet rule.

ANSWER: **eight**

066-12-56-07133

3. In 1950, random bombings and widespread strikes surrounded the chaotic "Royal Question" referendum on whether this office should be re-established; the question was settled by offering this title to a new occupant, Baudouin. An earlier holder of this title oversaw the "rubber atrocities" while holding personal control over the Congo Free State. Leopold II was a controversial occupant of, for 10 points, what office that rules over a country to the south of the Netherlands?

ANSWER: **King of Belgium** [or **King of the Belgians**; or **Koning der Belgen**; or **Roi des Belges**; or **König der Belgier**]

019-12-56-07134

4. The protagonist of this story is angered when a newspaper clerk offers him snuff after he discovers that the title figure has become a State Councilor, three ranks above him in the civil service. In this story, the protagonist writes a letter accusing Madame Podtochin of witchcraft. The barber Ivan Yakovlevich decides to throw the title object into the Neva after he discovers it in a loaf of bread. For 10 points, name this Nikolai Gogol short story about Kovalyov, the possessor of a certain unruly facial feature.

ANSWER: "The **Nose**" [or "**Nos**"]

014-12-56-07135

5. One author with this last name wrote a novel about Marguerite Gautier and Armand Duval entitled *The Lady of the Camellias*. Another author with this last name created the character Benedetto, who is sponsored to join society as the "Viscount Cavalconti." That author with this last name created characters such as the Count de Morcerf, who marries Mercedes, and a character who seeks revenge against Danglars. For 10 points, identify this last name of the creator of Edmond Dantes, the author of *The Count of Monte Cristo* and *The Three Musketeers*.

ANSWER: **Dumas** (doo-MAH)

126-12-56-07136

In 1999, Texas A&M discontinued what pre-football-game tradition when twelve people were killed during a construction collapse?

ANSWER: the Aggie **Bonfire**

126-12-56-07137

This is a calculation question. What is the sine of the fourth-quadrant angle whose tangent is $-9/40$?

ANSWER: **$-\frac{9}{41}$**

126-12-56-07137