



1. A failed attempt to influence this issue through the courts resulted in the 2006 *Wilkinson v. Kitzinger* case. Michael Gove and Boris Johnson are among those who have endorsed this status, though Rowan Williams has spoken out against it. At the 2011 Conservative Party conference, David Cameron announced that he supports this change not "despite" but "because" of his conservatism. For 10 points, a free vote by 2015 may implement what change to marriage laws in the United Kingdom?

ANSWER: same-sex marriage in the United Kingdom [or gay marriage or other obvious equivalents; or "England" or "Wales" or the "UK" in the place of "United Kingdom" if given]

019-13-74-07101

2. This author wrote about Masuji Ono, a painter in postwar Japan who once made propaganda for the Japanese Empire, in *An Artist of the Floating World*. In one of his books, Kathy and Tommy are clones bred to die after their fourth organ donation. In another novel by this writer, the butler Stevens takes a trip to see Miss Kenton and realizes his boss Lord Darlington was a fascist. For 10 points, name this author of *Never Let Me Go* and *The Remains of the Day*, a British writer of Japanese heritage.

ANSWER: Kazuo Ishiguro

080-13-74-07102

3. This man advocated the value of private tutors in *Some Thoughts Concerning Education*. While working for Anthony Ashley Cooper, he advocated for freedom of religion for everyone but atheists in *The Fundamental Constitutions of Carolina*. He argued that the human mind originally resembles a "blank slate," or "tabula rasa." For 10 points, name this philosopher who wrote the *Essay Concerning Human Understanding* and a work influencing the American Founding Fathers, *Two Treatises of Government*.

ANSWER: John Locke

030-13-74-07103

4. This author recalled spending the "Fruitcake Fund" and getting the dog Queenie drunk in his "A Christmas Memory." Randolph manipulates Joel Knox in this man's novel *Other Voices, Other Rooms*. He inspired the character of Dill in his lifelong friend Harper Lee's *To Kill a Mockingbird*. His own major book follows Alvin Dewey's apprehension of Perry Smith and Dick Hickock for the murder of the Clutter family. For 10 points, name this author of *In Cold Blood*.

ANSWER: Truman Capote [or Truman Streckfuss Parsons]

019-13-74-07104

5. The speedup gained by using this technique is limited by the time not using it according to Amdahl's law. This technique can run into problems if operations are not atomic, because output becomes non-deterministic when "race conditions" occur, requiring the use of synchronization. A common problem to be avoided in this technique is deadlock. For 10 points, name this technique that differs from sequential programs by allowing operations to happen simultaneously, as with multiple processors.

ANSWER: parallel computing [or multi-threaded computing; or concurrent computing; or distributed computing; or multiple core computing; or "processing" in place of "computing;" or multiple processor computing until it is read]

201-13-74-07105

6. In one scene in this novel, a commander is hindered by the Stone Sentinel Maze. Several characters in it take a pledge in the Oath of the Peach Garden. In this novel, the marriage of Lady Sun to Liu Bei is planned by Sun Quan after he wins the Battle of Red Cliffs, and the tyranny of Dong Zhou is ended by Lu Bu. For 10 points, name this classic Chinese novel which details the turmoil towards the end of the Han Dynasty, including a split into multiple realms.

ANSWER: *The Romance of the Three Kingdoms* [or San Guo Yan Yi]

192-13-74-07106

7. One of this author's characters is rescued with his manservant Conseil and the Canadian harpoonist Ned Land after the sinking of the *Abraham Lincoln*. Another of his characters marries the Indian princess Aouda, is pursued by the detective Inspector Fix, and is served by Passepartout. One novel by this author concerns the submerged *Nautilus* and its Captain Nemo. For 10 points, name this French author of *Around the World in Eighty Days* and *Twenty Thousand Leagues Under the Sea*.

ANSWER: Jules Verne

015-13-74-07107

8. For fluid flow, this quantity is equal to flow rate times pressure. For a sinusoidal signal, this quantity is equal to the absolute value of the amplitude squared. It is equal to current times voltage for electrical components. In optics, one form of it is measured with diopters. This quantity is also given by the force dotted by the velocity vector, and its units are Joules per second, or watts. For 10 points, name this quantity equal to work done per unit time.

ANSWER: power

048-13-74-07108

9. These people paid a namesake "rent" of a penny per month to support an organization advocating for their political rights. The Duke of Wellington's government allied with Robert Peel to revoke the Test Act, allowing these people to serve in Parliament. Daniel O'Connell led the campaign for the "emancipation" of, for 10 points, what religious group, that had been suppressed in British politics since Henry VIII formed the Anglican church?

ANSWER: Catholics in the United Kingdom

019-13-74-07109

10. Although not the Moon, the surface of an object with this name features lobate scarps. That object is also home to the "Weird Terrain," which lies antipodal to the Caloris Basin. When bonded to sulfur, a metal of this name forms cinnabar. MESSENGER mapped that object with this name. The element with this name is a silvery liquid at room temperature, which led to its use in thermometers, despite its toxicity. For 10 points, name the object that is closest to the Sun.

ANSWER: mercury

149-13-74-07110

11. In 1989, the holder of this position was accused of engineering the "Bounty Bowl" game. The person who held this job from 1976 to 1982 retired due to "burnout," two years after losing the Super Bowl to the Raiders. In addition to Buddy Ryan and Dick Vermeil, this job has been filled by a man who made five NFC Championship Game appearances before an injury to Michael Vick during the disastrous 2012 season. For 10 points, name this job that Andy Reid was fired from in December 2012.

ANSWER: head coach of the Philadelphia Eagles [or head coach of the Philadelphia Eagles]

019-13-74-07111

12. David Sharp died while trying to do this feat and was reportedly ignored by passerby. Jon Krakauer's book *Into Thin Air* was about his experiences doing it. People who engage in this feat pass through the Khumbu Icefall, a section which has killed many Sherpas. For 10 points, name this feat first achieved by Tenzing Norgay and Sir Edmund Hillary, which involves ascending the tallest peak in the world.

ANSWER: climbing Mount Everest [or Sagarmatha or Chomolungma in place of "Everest"]

052-13-74-07112

13. A Cauchy sequence in a complete metric space is automatically of this type. The root test is one method designed to test for this property. This property does not hold for arithmetic sequences or the harmonic series. All geometric series for which  $r$  is less than one exhibit this property. A sequence has this property if and only if it has a limit. For 10 points, name this property that a sequence has if its values gradually approach a certain number, the opposite of divergent.

ANSWER: convergent [or word forms]

131-13-74-07113

14. Music events in this city include the Earshot Jazz Festival and Bumbershoot. This city's native son Joshua Ramus joined Rem Koolhaas to design its public library. The namesake of this city ceded the land for it in the Treaty of Port Elliott. Suburbs including Everett, Bellevue, and Redmond surround this city. A major landmark here was built for the 1962 World's Fair and provides a view of Mount Rainier from its top. For 10 points, name this city on Puget Sound, the home of the Space Needle in Washington.

ANSWER: Seattle

019-13-74-07114

15. At a hearing in this novel, a woman testifies that an earring found in a furnace belonged to her daughter, and a dead body is wheeled into the courtroom by the sensationalist coroner. The private detective Britten fails to intimidate the protagonist, but the prosecutor Buckley succeeds in extracting a confession. The lawyer Boris Max questions Mr. Dalton about the poor conditions of tenements in, for 10 points, what novel in which Mary is killed by Bigger Thomas, written by Richard Wright?

ANSWER: Native Son

019-13-74-07115



1A. The city of Nagasaki is found on what island of Japan, the southernmost of the four major islands?

ANSWER: Kyushu

1B. The macroeconomic definition of aggregate demand is the sum of consumer consumption, government spending, net exports, and what fourth quantity?

ANSWER: private investment

2A. Continental mountain ranges are mainly formed in what process, which creates namesake "belts" as various tectonic plates collide?

ANSWER: orogeny [or orogenesis]

2B. What leader stopped his country's nuclear aid to China and started Mao's fear of revisionism by giving his speech "On the Cult of Personality and Its Consequences"?

ANSWER: Nikita Sergeyevich Khrushchev

3A. "Legs," "Sleeping Bag," and "Sharp Dressed Man" were among the 1980s hits of what band, known for their Texas rock sound and their long beards?

ANSWER: ZZ Top

3B. Robert Browning's "My Last Duchess" and "Andrea del Sarto" are examples of what type of poem in which a persona reveals his thoughts at a specific point in time to a specific audience?

ANSWER: dramatic monologue

4A. This is a 20-second calculation question. What is the volume of a cube with surface area 24 square centimeters?

ANSWER: 8 cubic centimeters

4B. This is a 20-second calculation question. The sum of the digits of a two-digit number is 12. When the digits are reversed, the new number is exactly 18 more than the old number. What is the original number?

ANSWER: 57

5A. Name the composer who included the aria "Softly awakes my heart" in his opera *Samson and Delilah* and also wrote *Carnival of the Animals*.

ANSWER: Camille Saint-Saëns

5B. Gustave Caillebotte (KYE-uh-bot) sits on a chair in the bottom right, while the painter's wife plays with a dog, in what Renoir (reh-NWAH) painting set on the Maison Fournaise (foor-NAY), depicting a group of people enjoying a meal?

ANSWER: Luncheon of the Boating Party [or *Le déjeuner des canotiers*]

6A. What object is known as "zvezda" (zuh-VEZ-duh) in Russian, "kohav" (COH-hov) in Hebrew, and "stella" in Latin?

ANSWER: a star

6B. What character mentors Candide and proclaims that we live in the "best of all possible worlds"?

ANSWER: Doctor Pangloss

7A. Name the architect who designed Ohio University's Punch Card Park, the Montgomery, Alabama Civil Rights Memorial, and the Vietnam Veterans Memorial in Washington, D.C.

ANSWER: Maya Ying Lin

7B. What Indian prime minister was assassinated by her bodyguards after ordering Operation Blue Star on the Golden Temple at Amritsar?

ANSWER: Indira Priyadarshini Gandhi [prompt on Gandhi]

8A. What isotope of hydrogen is found in heavy water and has one proton and one neutron in its nucleus?

ANSWER: deuterium

8B. What quantity, unlike total energy, is conserved by both elastic and inelastic collisions?

ANSWER: linear momentum [do not accept "angular momentum"]

9A. This is a 30-second calculation question. You pay \$2 to play a game in which 1/3 of the time you win nothing, 1/3 of the time you win \$1, and 1/3 of the time you win \$4. To the nearest cent, how much money do you expect to lose?

ANSWER: 33 cents [or \$0.33]

9B. This is a 30-second calculation question. What is sine theta times cosine theta when theta equals 75 degrees?

ANSWER: 1/4 [or 0.25]

10A. What movement during the Radical segment of the Protestant Reformation emphasized pacifism, autonomy from the larger society, and the idea that infants could not choose to accept Christianity, and survives today as groups such as the Amish and the Mennonites?

ANSWER: Anabaptism [or Anabaptists, etc]

10B. Identify the symphonic suite by Nikolay Rimsky-Korsakov which was inspired by, and named for the narrator of, the *Arabian Nights*.

ANSWER: Scheherazade



1. A mixture of o-xylene and acetone can be used to illustrate this law, which applies best to substances whose mixing enthalpy is zero. One side of the equation subject to this law can be multiplied by the fugacity coefficient and the other by the activity coefficient to account for non-ideality. For 10 points, name this law from solution chemistry, stating that the vapor pressure for a solution is equal to the sum of the product of the vapor pressure of each component times its mole fraction.

ANSWER: Raoult's Law

048-13-74-07117

2. The speaker of this poem exclaims, "Thou, silent form! dost tease us out of thought as doth eternity." This poem extols a "bold lover" whose beloved "cannot fade" and "happy boughs" that cannot shed their leaves. This poem addresses a "still unravished bride of quietness," a work of art that teaches man, "Beauty is truth, truth beauty." For 10 points, name this poem by John Keats about a piece of ancient pottery.

ANSWER: "Ode on a Grecian Urn"

080-13-74-07118

3. One December 2012 incident in this state resulted in the hospitalization of Joseph Hofstetter and Theodore Scardino. That incident in this state was perpetrated by a man who wrote that what he liked doing best was "killing people." William Spengler killed two firefighters in this state. This state's largest city is home to a controversial "stop and frisk" law which its mayor declined to end. For 10 points, identify this state whose largest city is governed by mayor Michael Bloomberg.

ANSWER: New York

189-13-74-07119

4. This city's government was dominated by a large assembly known as the "apella" and a smaller body, named for the advanced age of its members, the "gerousia." Legendarily, its government was designed by Lycurgus. The Agiad and Euryontid lines provided the two kings who simultaneously ruled this city, which annually declared the "krypteia," a period of time in which its slave class, or helots, were hunted. For 10 points, name this highly militarized Greek city-state that won the Peloponnesian War.

ANSWER: Sparta [or Lacedaemon]

019-13-74-07120

5. One person who held this office in the 1950s chaired hearings on the Mafia and juvenile delinquency caused by comic books, and ran as Adlai Stevenson's second vice-presidential nominee. This office was held by Estes Kefauver and, for two terms, by actor Fred Thompson. From 2003 until 2007, a holder of this office was also the Majority Leader; that was Bill Frist. It was previously held by both the senior and junior Al Gore. For 10 points, name this legislative office now held by Bob Corker and Lamar Alexander.

ANSWER: United States Senator from Tennessee [prompt on United States Senator]

019-13-74-07121

6. One group which appeared on the 2012 season of this show abandoned the names "LYLAS" and "1432" and performed the Shontelle song "Impossible" twice on this show. That group, Fifth Harmony, finished third in the 2012 season of this show, which ended with L.A. Reid announcing his departure from a judge position. Tate Stevens defeated Carly Rose Sonenclar in the finale of, for 10 points, what FOX singing competition show also judged by Simon Cowell, Demi Lovato, and Britney Spears?

ANSWER: The X Factor

019-13-74-07122

7. This author wrote that "Too long a sacrifice can make a stone of the heart" in one poem, three of whose four stanzas end with the line "A terrible beauty is born." This writer, who loved a revolutionary named Maud Gonne, helped Lady Gregory found the Abbey Theater. A poem by this writer begins with the image of a falcon "turning in the widening gyre" and asks, "What rough beast...slouches towards Bethlehem to be born?" For 10 points, name this Irish poet of "Easter, 1916" and "The Second Coming."

ANSWER: William Butler Yeats

080-13-74-07123

8. This statement can be extended to three-dimensional figures, according to de Gua's theorem. Its solutions always include two odd numbers. This statement cannot be proven trigonometrically, because trigonometric identities are proven using it. It is a specific case of the law of cosines, in which one of the involved angles is ninety degrees. For 10 points, identify this theorem used to find the hypotenuse of a right triangle, commonly expressed as "A-squared plus B-squared equals C-squared."

ANSWER: Pythagorean theorem

189-13-74-07124

9. This author edited the periodical *Merry's Museum* and wrote the book *Silver Pitchers*, which documents the failure of Fruitlands, the utopian community founded by her transcendentalist father Bronson. She wrote the sequels *Good Wives* and *Jo's Boys* to continue the story of Professor Bhaer and the March sisters that she established in her most noted novel. For 10 points, name this author who created Beth, Meg, and Amy in *Little Women*.

ANSWER: Louisa May Alcott

019-13-74-07125

10. A condition associated with muscular dystrophy, Coats' disease, affects this structure. One type of cell in this structure utilizes cGMP to allow a steady flow of sodium ions. This structure utilizes bipolar cells in its "indirect" pathway, while amacrine cells in it project to ganglion cells. One disease affecting this structure is its namesake "pigmentosa." Its central portion is known as the macula. For 10 points, name this layer of the eye that contains photoreceptor cells, such as rods and cones.

ANSWER: retina

192-13-74-07126

11. The last of three clauses in Article IV, Section 2 of the Constitution mandated that this kind of law be passed. These laws were upheld by the cases of *Prigg v. Pennsylvania* and *Ableman v. Booth*, both of which overturned the "personal liberty laws" aimed at contravening this kind of law. Part of the Compromise of 1850 was a harsh law of this kind. For 10 points, identify these controversial laws which mandated that escapees who reached the North be returned to the South.

ANSWER: fugitive slave laws [or fugitive slave acts]

019-13-74-07127

12. One study of this disease, led by John Cutler, involved treating intentionally infected Guatemalans with penicillin. Malaria was used to treat the late stages of this condition until the 1940s. Salvarsan, a "magic bullet" developed by Paul Ehrlich, was the first effective treatment for this disease. Researchers in the "Tuskegee experiment" allowed six hundred black men with this disease to go untreated for forty years. For 10 points, name this sexually transmitted disease.

ANSWER: syphilis

131-13-74-07128

13. This practice was upheld in the 1937 *Breedlove v. Suttles* Supreme Court case, though it was completely outlawed by 1966's *Harper* decision. The *Harman v. Forssenius* case did not accept a residency requirement as a substitute for this practice. It was outlawed in federal elections by the Twenty-Fourth Amendment, and, like literacy tests, could be avoided through the grandfather clause. For 10 points, name this Southern practice under which a flat fee had to be paid to vote.

ANSWER: **poll tax**

019-13-74-07129

14. The site for this city was chosen after one man saw twelve vultures. In the underworld, Anchises told his son that his descendants would rule this place. It was founded by the sons of Rhea Silvia, who were saved by a she-wolf after being left to die of exposure. One of its founders killed the other in an argument over building a wall. Wives for its original settlers were taken from the Sabines at a festival for Neptune. For 10 points, name this city, legendarily founded by Romulus and Remus.

ANSWER: **Rome**

121-13-74-07130

15. The ACE and the UVCS instrument on the SOHO mission are designed to study this phenomenon. This phenomenon twists a certain magnetic field into the Parker spiral. The boundary between this phenomenon and the interstellar medium is called the bow shock. Its interaction with the Earth's magnetic field forms the magnetosphere. It's the reason that comet tails always point away from the sun. For 10 points, name this phenomenon, a stream of charged particles ejected from the atmosphere of the sun.

ANSWER: **solar wind** [or **stellar wind**]

048-13-74-07131





1. One group of cells in this organ secrete NPY; that is this structure's arcuate nucleus. This structure's ventromedial nucleus responds to increased leptin levels to signal satiety. This structure's pre-optic nucleus is responsible for triggering the release of sex hormones. Cell bodies in this organ are responsible for synthesizing oxytocin and ADH. This structure uses the hypophyseal portal system to send releasing factors to the pituitary gland. For 10 points, name this master regulator of homeostasis, located in the brain.

ANSWER: hypothalamus [prompt on brain]

048-13-74-07132

2. In this novel, a letter from the suicidal Littlepaugh reveals graft in the filling of a high-paying power company job. Following Tom's paralysis during a football game in this novel, and the suicide of Judge Irwin, Anne Stanton's affair is revealed to Adam, who responds by assassinating the governor. Jack Burden helps Willie Stark consolidate power in, for 10 points, what novel, based on the Huey Long administration and written by Robert Penn Warren?

ANSWER: All the King's Men

019-13-74-07133

3. Variations of this technique include FLAIR. This technique, which often uses gadolinium-containing contrast agents, is based on measuring the T1 and T2 relaxation time after an RF pulse. This technique is dependent upon the presence of water in tissues. It is often used to diagnose muscle injuries and brain tumors. For 10 points, name this medical imaging technique that uses the same principle as NMR.

ANSWER: MRI [or magnetic resonance imaging; prompt on NMR; prompt on nuclear magnetic resonance]

048-13-74-07134

4. Those who helped find the rebel Tsali during this event were allowed to settle the Qualla Boundary. Elias Boudinot and Stand Watie negotiated a treaty orchestrating this event with John Ross at New Echota. Attempts to forestall this event included the case *Worcester v. Georgia*. This event caused the death of about four thousand of its fifteen thousand participants, who were moved to what became Oklahoma. For 10 points, name this brutal 1838 forced migration of the Cherokee.

ANSWER: Trail of Tears [prompt on descriptive answers such as Cherokee migration or Indian removal]

019-13-74-07135

5. In French Canadians, the most common cause of this disease is a G to A splice site mutation in intron seven. Another mutation that causes it is a four basepair insertion in exon eleven. This disease is caused by mutations in the gene encoding hexaminosidase A, leading to a buildup of gangliosides. This autosomal-recessive disease commonly causes death in infancy. For 10 points, name this disease, common in Ashkenazi Jews, in which certain fats build up in the brain.

ANSWER: Tay-Sachs disease

048-13-74-07136

This is a calculation question. In radians, what is the arcsine of negative one half?

ANSWER: -pi/6 radians [do not accept or prompt "pi/6 radians" or "-30 degrees"]

At what 1781 battle did Lord Cornwallis surrender, ending British hopes to win the Revolutionary War?

ANSWER: Battle of Yorktown