



1. Howard Jarvis successfully advocated for an amendment to this state's constitution that limited the maximum level of property taxes. Over sixty percent of voters supported that ballot initiative here, which was known as Proposition 13. A man who promised to make the "welfare bums" work defeated Pat Brown for the governorship here in 1966. Brown won its 1962 election running against Richard Nixon, and his son Jerry is the current governor of this state. For 15 points, name this state, where Ronald Reagan was governor in the 1960s.

ANSWER: California

121-13-104-07101

BONUS: What American director produced *Spartacus* and *2001: A Space Odyssey*?

ANSWER: Stanley Kubrick

140-13-104-0710-11

2. On this exact date, a president gave a speech containing a last minute line about "inevitable triumph" added by Harry Hopkins. A vote taken on this day featured a sole dissent from Jeannette Rankin and passed 388 to 1 in the House of Representatives. On this day, a speaker noted that American forces had been attacked on Wake Island. That speech begins by noting the previous day "will live in infamy." For 15 points, give the exact date of the United States declaration of war on Japan in World War II, which occurred the day after the Pearl Harbor attacks.

ANSWER: December 8, 1941 [prompt on partial answer]

052-13-104-07102

BONUS: This is a 30-second calculation question. A regular polygon has n sides and its exterior angles each measure n plus 9 degrees. What is the value of n ?

ANSWER: 15

190-13-104-0710-11

3. The van Allen belts shuttle particles between the magnetosphere and this region. A layer in this region is named for Arthur Kennelly and Oliver Heaviside. At night, only the F layer of this region is significantly present, but it has D, E, and F layers during the day. This layer refracts radio waves, making long-range radio communication possible. For 15 points, identify this region of the atmosphere characterized by the presence of particles ionized by solar radiation.

ANSWER: ionosphere [prompt on thermosphere]

066-13-104-07103

BONUS: What scale of hurricane strength classifies hurricanes into categories one through five based on wind speed?

ANSWER: Saffir-Simpson scale

014-13-104-0710-11

4. This document mandated that all foreign relations be conducted under the "Model Treaty," a template for bilateral agreements that focused on free trade and defined lists of contraband. This document created an executive body called the Committee of the States, and the government organized under it passed the Northwest Ordinance. The 1787 Shays Rebellion highlighted the weakness in this document. For 15 points, name this ineffectual early U.S. governing charter that was abolished in the Constitutional Convention.

ANSWER: Articles of Confederation and Perpetual Union

064-13-104-07104

BONUS: Name the crusade in which the battles of Arsuf and Jaffa were fought between forces led by Richard I of England and Saladin.

ANSWER: **Third** Crusade

153-13-104-0710-11

5. During these cells's development, they go from double-negative to double-positive to single-positive. These cells are further classified based on what MHC complex they recognize, as they contain one or both of the CD4 or CD8 markers. Along with macrophages, HIV infects a type of these cells. Like NK cells and B cells, these cells are classified as lymphocytes, and have types like cytotoxic and helper. For 15 points, name this type of white blood cell that matures in the thymus.

ANSWER: helper **T** cells [prompt on **lymphocyte** until it is read; prompt on **white blood cell** until it is read]

140-13-104-07105

BONUS: What "Generalissimo" led Spain from 1939 until his death in 1975 after winning the Spanish Civil War?

ANSWER: Francisco **Franco** y Bahamonde

015-13-104-0710-11

6. The protagonist of a novel by this author convinces Captain Anderson to allow James Colley to perform a religious service on Anderson's ship. In another of his novels, Christopher Martin recounts his life as he dies in the North Atlantic. This author of *Rites of Passage* and *Pincher Martin* described how a dead parachutist frightens a group of boys, who mistake the body for "the Beast" that haunts the island on which they have been stranded. For 15 points, name this British novelist of *Lord of the Flies*.

ANSWER: William **Golding**

121-13-104-07106

BONUS: This is a 30-second calculation question. A regular hexagon is inscribed inside a circle with area pi. What is the area of the hexagon?

ANSWER: **3** times the square **root** of **3** all **over 2** [or **3/2** times the square **root** of **3**]

003-13-104-0710-11

7. Napoleon Hill wrote the self-help book *The Laws of Success* on the advice of this man. His own writings include *The Gospel of Wealth*. His partner Henry Clay Frick hired Pinkerton troops to attack striking workers at one of his plants in Homestead, Pennsylvania. The world's first billion-dollar corporation was formed when he sold his company to J.P. Morgan to create U.S. Steel. For 15 points, name this Scottish-American steel manufacturer.

ANSWER: Andrew **Carnegie**

121-13-104-07107

BONUS: What French novelist included *Pere Goriot* (PAIR GORE-ee-oh) in his series *The Human Comedy*?

ANSWER: Honore de **Balzac**

014-13-104-0710-11

8. A member of this family said his presidential campaign had "Big Mo," a reference to momentum, and used the phrase "voodoo economics" to denounce his party rival. That member of this family used the expression "a thousand points of light" to discuss civic involvement. Another member of this family was President when the Partial-Birth Abortion Ban Act, the No Child Left Behind Act, and the Patriot Act were passed. For 15 points, name this family which produced the 41st and 43rd Presidents of the United States, a father-son pair.

ANSWER: **Bush**

052-13-104-07108

BONUS: This is a 30-second calculation question. A basketball player makes a second free throw 80% of the time after making the first, but only 50% of the time if he misses the first. If he makes his first free throw 70% of the time, what is the expected number of free throws he makes in two shots?

ANSWER: **1.41**

003-13-104-0710-11

9. The value for the glass transition in polymers is often found using a differential scanning variety of these devices. A sample is placed in a combustion crucible and ignited in the most common type of these devices found in labs, the bomb. A simple example of these devices can be created by nesting two styrofoam cups and capping them with a lid that has two holes, for a thermometer and stirrer. For 15 points, identify these devices that are used to measure the heat of a reaction and heat capacity of materials.

ANSWER: **calorimeters**

066-13-104-07109

BONUS: What Frenchman created an international incident in 1793 when he traveled through the U.S. trying to raise anti-British sentiment and arm privateers to fight with the French?

ANSWER: Edmond-Charles **Genet** [or Citizen **Genet**]

015-13-104-0710-11

10. In response to Mayor Levi Boone's restrictions on taverns in this city, the 1855 Lager Beer Riot broke out. Another of its mayors, Carter Harrison, was assassinated by a failed office seeker. Dr. Henry Howard Holmes killed numerous people in this city during a festival. As documented in the book *The Devil in the White City*, it hosted the 1893 World's Columbian Exposition. This city suffered a disaster legendarily caused by Mrs. O'Leary's cow kicking over a lantern. For 15 points, name this Illinois city severely damaged in an 1871 "great fire."

ANSWER: **Chicago**

052-13-104-07110

BONUS: Shale and sandstone are classic examples of what type of rocks?

ANSWER: **sedimentary** rocks

014-13-104-0710-11

11. In Ray Bradbury's novel *Dandelion Wine*, Colonel Freeleigh dreams of being one of these objects. A substance made from these objects is thrown at Edgar by Heathcliff in *Wuthering Heights*. John Steinbeck's novel *In Dubious Battle* involves a strike of workers who procure these objects. Several of these objects are thrown at Gregor Samsa by his father in Franz Kafka's *The Metamorphosis*. For 15 points, name this type of fruit that is tragically eaten by Adam and Eve in *Paradise Lost*.

ANSWER: **apples**

030-13-104-07111

BONUS: What character created by Daniel Defoe becomes a servant for Robinson Crusoe after being rescued from cannibals?

ANSWER: **Friday**

227-13-104-0710-11

12. For a subset E of the real numbers, if this number, as well as this number plus x for all x in E, are in E, then E is called an inductive set. Two numbers are relatively prime if their greatest common divisor is this number. The sum of the probabilities of an event A and its complement is equal to this number. Evaluating the sine of pi over two radians yields this number, and the unit circle has a radius of this length. For 15 points, the multiplicative inverse is equal to what smallest positive integer?

ANSWER: **one**

149-13-104-07112

BONUS: What 1996 Adam Sandler movie stars Christopher McDonald as the arrogant Shooter McGavin and Carl Weathers as a one-handed retired golfer?

ANSWER: Happy Gilmore

015-13-104-0710-11

13. Reversible expansions and compressions that have this property constitute two stages of the Carnot cycle. In this type of reversible expansion, the work done equals RT times the log of the ratio of the volumes. For ideal gases undergoing this type of process, work is equal to the negative of heat, as these processes proceed with no change in internal energy or enthalpy, and pressure times volume is constant. For 15 points, name this property possessed by phase transitions, which occur with no change in temperature.

ANSWER: isothermal processes [or constant-temperature processes until "temperature" is read; prompt on phase transitions; do not accept "adiabatic processes"]

190-13-104-07113

BONUS: What American general developed the Union's "anaconda plan" during the Civil War after leading troops in the War of 1812 and the Mexican-American War?

ANSWER: Winfield Scott

015-13-104-0710-11

14. This author wrote a short story in which Lady Carlotta is mistaken for a governess and decides to teach the children with the "Schartz-Metterklume Method." Another of this author's short stories follows Georg and Ulrich, who are hunting in the woods, and whose calls for their men's aid eventually attract wolves. This author of "The Interlopers" wrote a short story that ends with the line "Romance at short notice was her specialty." For 15 points, identify this British short story writer of "The Open Window."

ANSWER: Saki [or Hector Hugh Munro]

126-13-104-07114

BONUS: In what war did the Duke of Marlborough win the Battle of Blenheim (BLEN-um) in 1704?

ANSWER: War of the Spanish Succession

014-13-104-0710-11

15. These things originate in source regions that are flat and have light surface winds. These things are designated with a combination of a small c or small m, for continental or marine, and a big P or big T, for polar and tropical. On surface weather maps, transition zones between them are marked by lines with equally spaced triangles, semicircles, or a combination of both and are called fronts. For 15 points, name these large bodies of air that have a consistent temperature and moisture content.

ANSWER: air masses

066-13-104-07115

BONUS: The ceiling of the Sistine Chapel is made up of what type of painting, which is produced by mixing pigments with water and placing it on top of lime plaster?

ANSWER: fresco

140-13-104-0710-11

16. A Glu-104-Asp mutation in one enzyme in this pathway causes a rare chronic hemolytic anemia and cardiomyopathy. An isomerase in this pathway is one of the few catalytically perfect enzymes. The first enzyme in this pathway is hexokinase. This process begins with an investment phase and ends with a payoff phase, which uses substrate-level phosphorylation to generate a net of two ATP. For 15 points, name this process that generates a pair of pyruvate molecules by splitting a monosaccharide.

ANSWER: glycolysis [or Embden-Meyerhof-Parnas pathway]

048-13-104-07116

BONUS: What country's July 2013 presidential elections selected Ibrahim Boubacar Keita to replace Amadou Toumani Toure, who was deposed in a coup for failing to deal with the Tuareg rebellion in Azawad?

ANSWER: Republic of **Mali** [or Republique du **Mali**; or **Mali** ka Fasojamana]

153-13-104-0710-11

17. The second section of this novel intersperses events such as Prue's death in childbirth with the decay of a house. At the beginning of this book, James imagines killing his father because he insists the weather will be bad. The matriarch of the central family dies abruptly in this novel's section "Time Passes." In this novel, Lily Briscoe finally completes her painting and the Ramsays take a boat to the title structure. For 15 points, name this novel by Virginia Woolf.

ANSWER: **To the Lighthouse**

191-13-104-07117

BONUS: This is a 30-second calculation question. Glorps have three eyes and two mouths and Fleebles have four eyes and one mouth. In a mixed group of Glorps and Fleebles, there are 68 eyes and 32 mouths. How many Glorps are in the group?

ANSWER: **12**

003-13-104-0710-11

18. This character type is exemplified by the picaresque storyteller Barry Lyndon in a novel by William Thackeray. Controversially, Dr. James Sheppard, the killer in Agatha Christie's *The Murder of Roger Ackroyd*, turns out to be one of these character types, which critics claimed was audience betrayal. Due to his immaturity, Huck Finn is one of these character types. For 15 points, name this type of literary character, a person who cannot be trusted while telling the story to the audience.

ANSWER: **unreliable narrator** [or **lying narrator**; or obvious equivalents]

052-13-104-07118

BONUS: What school of international relations theory believes that rational, unitary states act according to power relations in an anarchic international system?

ANSWER: neorealism [or structural realism]

153-13-104-0710-11

19. This deity slumbers some distance away from a village in the hills in a "Dresden" painting by Giorgione. This goddess stands between Minerva and Juno in Rubens's painting *The Judgment of Paris*. Two women rummage through a chest in the background of a painting in which this goddess reclines on a bed with a small dog. For 15 points, name this goddess who appears in a Titian painting dedicated to the Duke of Urbino, and stands on a shell, having emerged from the ocean, in a Botticelli painting depicting her "birth."

ANSWER: **Venus** [or **Aphrodite**]

030-13-104-07119

BONUS: What type of colloid consists of solid or liquid particles suspended in a gas, examples of which include smoke and fog?

ANSWER: **aerosol** [or liquid **aerosol**; or solid **aerosol**]

239-13-104-0710-11

20. Thomas Graham is considered the inventor of this procedure. In injured patients, the indications for this procedure are summarized with the handy mnemonic AEIOU, and more chronic indications include a low GFR. A variant of this procedure is run through the peritoneal cavity. In general, this procedure uses a solution rich in bicarbonate, potassium, and calcium and removes creatinine and urea in the blood through a semipermeable membrane. For 15 points, name this procedure in which a large machine is used to replace the function of a kidney.

ANSWER: **dialysis** [or word forms]

020-13-104-07120

BONUS: What kind of bond formed between metals and nonmetals involves the complete transfer of one or more electrons from one atom to another?

ANSWER: **ionic**

014-13-104-0710-11

21. A disease resulting from a defect in this protein manifests in overly-bendy joints and is Ehlers-Danlos syndrome. Osteogenesis imperfecta is also caused by defects in this protein and manifests as brittle bones. Kidney basement membranes composed of this protein are misshapen in Alport syndrome. A motif in this protein features hydroxyproline, which requires Vitamin C for synthesis, explaining the degradation of this protein in scurvy sufferers. Glycine constitutes about a third of its amino acids. For 15 points, identify this triple-helical protein found in cartilage and blood vessels.

ANSWER: **collagen**

234-13-104-07121

BONUS: This is a 30-second calculation question. What is the area of an isosceles triangle with two legs of length 4 and vertex angle 150 degrees?

ANSWER: **4** units

233-13-104-0710-11

22. A portrait of this monarch was painted by Jean Clouet (cloo-EY). He was criticized for allying his country with the Ottoman Empire, the first European to do so. This king successfully invaded Italy by defeating Swiss pikemen at the Battle of Marignano (MAH-rin-YAH-no), but he was captured ten years later at Pavia (pah-VEE-uh). This monarch failed to strike an alliance with Henry VIII at the Field of the Cloth of Gold, but was successful in cultivating the French Renaissance. For 15 points, name this Valois (val-WAH) King of France who often fought against Holy Roman Emperor Charles V.

ANSWER: **Francis I** [prompt on **Francis**]

140-13-104-07122

BONUS: After it was leaked early, what band streamed their album *Reflektor* with clips from the movie *Black Orpheus*?

ANSWER: **Arcade Fire**

121-13-104-0710-11

23. cAMP (CAMP) and a cyclic nucleotide with this nucleobase are important secondary messengers. A nucleoside triphosphate with this nucleobase is one of the outputs of the citric acid cycle; that triphosphate is converted to ATP by NDK. This purine has an oxygen attached to its pyrimidine ring. Three hydrogen bonds connect this nucleobase to cytosine. For 15 points, name this nucleobase represented with a G.

ANSWER: **guanine** [or **G** until it is read]

066-13-104-07123

BONUS: Name the state home to the General Sherman Tree in its Sequoia National Park.

ANSWER: **California**

023-13-104-0710-11

24. During the Trojan War, Diomedes (die-OH-med-eez) crushed this man's hip with a stone. This man's crew saves Achaemenides (uh-kie-MEN-ih-deez) from the island of the Cyclopes. This hero kills the Rutulian king Turnus to avenge Evander's son Pallas. He visits his father in the underworld by using a golden bough after abandoning the Carthaginian queen Dido. This son of Anchises (un-KIE-seez) is celebrated as an ancient founder of Rome. For 15 points, name this hero whose travels were chronicled in a namesake epic by Virgil.

ANSWER: **Aeneas**

186-13-104-07124

BONUS: What was the name of the undiscovered solar body that would explain observed discrepancies in the orbits of Uranus and Neptune?

ANSWER: **Planet X**

140-13-104-0710-11

25. In this novel, McCann tries to persuade the protagonist to sign a political petition. The third chapter of this novel features a lengthy fire and brimstone sermon delivered by Father Arnall. Earlier, the protagonist endures traumatic experiences at Clongowes (CLAHN-gows) boarding school. At the end of this novel, the protagonist decides to exile himself from his native Ireland. For 15 points, name this partly autobiographical bildungsroman about Stephen Dedalus written by James Joyce.

ANSWER: A **Portrait of the Artist as a Young Man**

014-13-104-07125

00--20-0710-11

26. This poet defined "true wit" as "nature to advantage dressed: what oft was thought, but ne'er so well expressed." His *An Essay on Man* and *An Essay on Criticism* display his mastery of the heroic couplet. His most famous poem describes the Baron's theft of the title entity from Belinda with the aid of his scissors. For 15 points, name this epigrammatic eighteenth-century poet of the mock-epic *The Rape of the Lock*.

ANSWER: Alexander **Pope**

014-13-104-07126

00--20-0710-11



27. In this play, a character is told to find a Spanish costume in order to court the sister of Kastril, while another is blindfolded and humiliated in order to meet the "Queen of Fairy." The protagonist of this play deals with such characters as the tobacconist Drugger, the wealthy Sir Epicure Mammon, and the clerk Dapper, who wants to summon a familiar. In this play, Lovewit's butler Jeremy poses as Captain Face to join the con artist Subtle. For 15 points, name this Ben Jonson play featuring characters who desire the philosopher's stone.

ANSWER: *The Alchemist*

052-13-104-07127

00--20-0710-11

28. A woman in this opera is caught stealing by a page who sings "Thief! Thief!," but the title character comes to her aid. The protagonist of this opera plays a shepherd's pipe at its opening. This opera took its inspiration from a painting by Hieronymus Bosch, and it includes a scene in which the protagonist's mother sings "All That Gold." At its end, the title character offers his sole possession, a crutch, to King Melchior and has his lame leg healed as a reward. For 15 points, name this Christmas-themed opera by Gian Carlo Menotti, the first to be composed for American television.

ANSWER: *Amahl and the Night Visitors*

088-13-104-07128