

1. The mayoral race in a city in this state was the 2002 documentary *Street Fight*, which focused on Cory Booker's insurgent campaign against Sharpe James. Al Gore's chief rival for the 2000 Democratic Presidential nomination was Bill Bradley, a former senator from this state. This state's current governor received criticism in August when this state lost \$400 million in federal Race to the Top education grants due to clerical errors, and that governor defeated former-governor John Corzine. For 10 points, name this northeastern state that is currently governed by Chris Christie.

ANSWER: New Jersey

030-10-20-09101

2. This thinker argued against philosophical dependence on the senses by pointing out the changes a piece of wax undergoes when it melts. His formulation of the "mind-body problem" has led the influential idea of a separation between mental and physical properties to be known as this man's "dualism." This author of the *Meditations on First Philosophy Declared* "Je pense donc je suis" in his *Discourse on Method*. For 10 points, name this French philosopher who declared "I think therefore I am."

ANSWER: Rene Descartes

015-10-20-09102

3. This man once once avoided capital punishment for killing a fellow actor in a duel by pleading "benefit of the clergy" due to his ability to read from the Latin Bible. One play by this man includes the servant Brainworm, who goes with Old Knowell to spy on Edward Knowell. That play by this author is *Every Man in His Humour*. This man also wrote a play featuring the title con artist and his sidekick Mosca. For 10 points, name this English playwright of *Volpone*.

ANSWER: Ben Jonson

030-10-20-09103

4. This man invented a device that was modified by Tirrill. Along with his colleague Gustav Kirchoff, this scientist performed spectroscopic experiments that discovered rubidium and cesium. Along with Peter Desaga, this scientist invented a piece of laboratory equipment that is used to perform flame tests. For 10 points, name this German scientist who invented a commonly used laboratory burner.

ANSWER: Robert Wilhelm Eberhard Bunsen

026-10-20-09104

5. In one work by this man, the slow Thomas is promised the title character's daughter because of his dad's profession. In that work by this man, Béline is tricked by the servant Toinette and Cléante is allowed to marry Angélique by Argan. In another work by this man, the title character becomes engaged to Mariane and gains the deed to the house of Orgon through trickery, but is recognized at the end by the king. For 10 points, name this French playwright who wrote the dramas *The Imaginary Invalid* and *Tartuffe*.

ANSWER: Molière [or Jean-Baptiste Poquelin]

023-10-20-09105

6. In the ABC model, B genes coupled with A genes produce these structures. Symmetry of these structures is either actinomorphic or zygomorphic. Most dicots have four or five of these structures, while monocots typically have three or six of them. Smaller structures called sepals lie beneath these structures, the collection of which is known as the corolla. For 10 points, name these modified leaves that surround the reproductive organs of a flower.

ANSWER: petals [prompt on leaf or word forms thereof; accept flowers before "four"]

026-10-20-09106

7. Many jurisdictions allow the admissibility of expert testimony on battered woman syndrome to support this defense. The "retreat rule" is an exception to when this defense may be used. The "castle" doctrine is a subset of this defense. It can arise out of protection of others or of property. For 10 points, name this justification or excuse to violent offenses, which allows one to protect one's own person.

ANSWER: **self-defense** [or **private defense**]

026-10-20-09107

8. A threshold that is equivalent to the lowest value for this measurement is set at one thousand hertz. The smallest changes in value for this measurement are based on a just noticeable difference, which decreases as this value increases. The values of this measurement are based on a logarithmic scale so that a change in intensity by a factor of one thousand will result in an increase in value by 30. Exposure to values of this measurement over 140 will cause damage to a person's hearing. For 10 points, name this system of measuring the intensity of sound.

ANSWER: **decibels**

023-10-20-09108

9. John Raskob commissioned Lamb and Shreve to design this building. Its spire was designed to moor Zeppelin like ships. Upon completion it surpassed the Chrysler Building as the world's tallest building. This building once again became the highest building in its city after the destruction of the World Trade Center. For 10 points, name this Art Deco skyscraper in New York City completed in 1931.

ANSWER: **Empire State** Building

001-10-20-09109

10. In physics, renormalization is used to deal with sort of number. The tape on a Turing Machine is of this length. The cardinalities of sets of this type are given by aleph numbers. Euclid proved that there are this many primes. A population of this size is assumed by Hardy-Weinberg equilibrium. The symbol for this concept looks like a sideways eight. Pi has this many digits. For 10 points, name this concept that when applied to the length of a list, implies that it never ends.

ANSWER: **infinite** [or **infinity**; or **non-finite**]

001-10-20-09110

11. One commander at this site, James C. Neill, was forced to leave it due to an illness in his family. This location was reinforced by members of the DeWitt Colony, which had formed the Gonzales Rangers. This location fell while under the command of William Travis. A force of a couple thousand men under Santa Anna took this location in 1836 from around two hundred defenders who fought to the death, including Jim Bowie and Davy Crockett. For 10 points, name this mission located in San Antonio that fell during the war for Texan independence.

ANSWER: Battle of the **Alamo** [or Mission **San Antonio de Valero**]

023-10-20-09111

12. This man starred as Jonathan Wilk, a famed attorney who defends the child murders Judd Steiner and Artie Strauss in the movie *Compulsion*. This man also played the corrupt policeman Hank Quinlan in a film he directed that focused on a bomb plot near the Mexican border. That film was *Touch of Evil*. An hour of this man's second feature film was cut by RKO and has been lost. That movie focused on the fortunes of the title Indianapolis family and was *The Magnificent Ambersons*. For 10 points, name this man who depicted a newspaper mogul based on William Randolph Hearst in *Citizen Kane*.

ANSWER: Orson **Welles**

030-10-20-09112

13. Samuel Brannan became wealthy because of his widespread publicizing of this event. People journeying to this event by boat were nicknamed "Argonauts;" that journey often required sailing seventeen thousand miles around South America. Levi Strauss created blue jeans during this event. This event began with James Marshall's discovery at Sutter's Mill. Members of this event became known as "forty-niners." For 10 points, name this mass emigration to California of people seeking to get rich mining a precious metal.

ANSWER: California **gold rush**

004-10-20-09113

14. One character in this story shows favor or disfavor through the way he smokes his pipe and is named Nicholas Vedder. The title character of this work spends a lot of time with his dog Wolf. A group of silent men in this story play nine-pins and are supposedly led by Hendrick Hudson. The protagonist of this work leaves his home to go hunting due to his wife's incessant nagging, but when he returns almost no one remembers him. For 10 points, name this Washington Irving short story about a man who falls asleep for twenty years in the Kaatskill Mountains.

ANSWER: "**Rip Van Winkle**"

023-10-20-09114

15. In response to the possibility of this event, one leader reoriented his troops' focus through the Directive 51. Gerd von Rundstedt was responsible for withholding some armored troops from this operation. Part of this operation included the creation of a phantom army under George Patton that looked as though it would attack Pas de Calais (PAW deh cah-lay). This attack was given the name Operation Overlord and included five beach landing points. For 10 points, name this Allied invasion of Europe that took place on June 6, 1944.

ANSWER: **D-Day** [or **Normandy invasion**; or Operation **Overlord** before it is read]

023-10-20-09115

1A. What early Indian empire was ruled by Chandragupta and Ashoka and lasted from 321 to 185 B.C.?

ANSWER: **Mauryan** Empire

1B. Mount Mitchell is the highest peak in what North American mountain range, which runs from Newfoundland to Alabama?

ANSWER: **Appalachian** Mountains

2A. Name the famous speech that Martin Luther King delivered from the Lincoln Memorial during the March on Washington.

ANSWER: **"I Have a Dream"** Speech

2B. What video game series has had as part of its titles *World at War*, *Modern Warfare*, and the 2010 release *Black Ops*.

ANSWER: **Call of Duty** [or **CoD**]

3A. This is a 10-second calculation question. If a door is rotating around a post at π over 6 radians per second, how many seconds would it take the door to rotate two full circles?

ANSWER: **24** seconds

3B. This is a 10-second calculation question. What is $4 \cos^2 \theta + 4 \sin^2 \theta$ equivalent to?

ANSWER: **4**

4A. William Holman Hunt and John Everett Millais painted *Christ in the House of his Parents* and *Ophelia* as members of what 19th century art movement named for a Renaissance painter?

ANSWER: **Pre-Raphaelite** Brotherhood

4B. This is a 20-second calculation question. What is the value of $3 + 4i$ multiplied by its conjugate?

ANSWER: **25**

5A. This is a 20-second calculation question. What are the solutions for x in the absolute value of quantity $5x - 83$ and quantity equals 2.5? Give your answer using decimals.

ANSWER: **$x = 16.1, x = 17.1$**

5B. Which world leader, who recently claimed that "multiculturalism has failed," is the current German chancellor?

ANSWER: Angela **Merkel**

6A. What Chilean author of *Daughter of Fortune* wrote about the death of Rosa the Beautiful in *The House of the Spirits*?

ANSWER: Isabel **Allende**

6B. What Latin term was coined by Horace and refers to works which begin by relating the middle of a story?

ANSWER: **in medias res** [or **medias in res**]

7A. This is a 30-second calculation question. What is the mean of the set of primes that starts at 5 and ends at 19, inclusive?

ANSWER: **12**

7B. This is a 30-second calculation question. What is the surface area of a regular pyramid with a slant height of four, base perimeter of 10, and base area of 6.25?

ANSWER: **26.25**

8A. Embden and Meyerhof also name what biological pathway that uses phosphofructokinase-1 (fohs-foh-fruhk-toh-kahy-neys) to convert glucose to pyruvate?

ANSWER: **glycolysis**

8B. Which apostle, who was crucified on an upside-down cross, is considered the first pope?

ANSWER: St. **Peter**

9A. Name the Irish poet of "The Shield of Achilles" and "September 1, 1939."

ANSWER: W.H. **Auden**

9B. Name the sport common in England and former British colonies that has a bowler throw a ball towards a batsman, who stands in front of a wicket.

ANSWER: **cricket**

10A. What 1990 piece of legislation led to the installation of thousands of TTY machines and included other measures to prevent discrimination against handicapped people?

ANSWER: **Americans with Disabilities** Act of 1990

10B. Name the irrational number symbolized by the Greek letter phi and about equal to 1.618 that is often considered aesthetically pleasing when incorporated into art or architecture.

ANSWER: **golden ratio** [or **golden section**; or **golden mean**; or **divine proportion**]

1. The heaviest element in this group was synthesized by bombarding californium with calcium. The textbook example of a molecule with square planar geometry involves four fluorines bound to an element in this group. Ununoctium is technically a member of this group, which contains an element that potassium decays into, making it a viable alternative to carbon-14 dating. The most common element in this group is found in 0.94% of the atmosphere. For 10 points, identify this group with a full octet that contains xenon, radon, helium, and argon.

ANSWER: **noble gases** [or **inert gases**]

020-10-20-09117

2. Primo Levi wrote about his time in one of these places in his memoir *If This is a Man*. In a novel by William Styron, Sophie Zawistowska is forced to choose which of her children will die at one of these places. A book describing the conditions of these places is narrated by Eliezer, who loses his faith in God because of their inhumanity before being liberated by the American army at Buchenwald. Described by Elie Wiesel in *Night*, for 10 points, name these places, such as Auschwitz, where Nazis killed millions of Jews during World War II.

ANSWER: **concentration camps**

004-10-20-09118

3. This composer included movements inspired by Decoration Day and Thanksgiving in his *Holiday Symphony*, while his fourth symphony contains a section that incorporates the Watchman hymn. Ragtime influences can be seen in his composition *Central Park in the Dark*, a work which was grouped in the collection *Two Contemplations* with his piece *The Unanswered Question*. This composer of the *Concord Sonata* may be best known for a work that contains a movement named after "The Housatonic at Stockbridge." For 10 points, name this American composer of *Three Places in New England*.

ANSWER: Charles **Ives**

040-10-20-09119

4. The protagonist of this novel takes off all of his clothes and climbs a tree in protest after being unable to save the life of Snowden. At the end of this novel, the main character joyously discovers that Orr has escaped to Sweden, and decides to renege on a deal he made with Korn and Cathcart to be sent home. This novel's main character asks Doc Daneeka to declare him insane in order that he won't have to fly more combat missions, although his desire to get out of combat makes him sane according to the title rule. For 10 points, name this anti-war novel about Yossarian written by Joseph Heller.

ANSWER: **Catch-22**

004-10-20-09120

5. One person who was a part of this agreement had earlier been excommunicated by Innocent III. That excommunication given seven years before this agreement was prompted by the appointment of Stephen Langton to the Archbishopric of Canterbury. Langton led one group in getting this document figured out. That group that pushed for the creation of this document was made up of English barons. For 10 points, name this document that made explicit certain liberties held by the English people, and which was signed by John in Runnymede in 1215.

ANSWER: **Magna Carta** [or **Great Charter**]

023-10-20-09121

6. This principle explains why the use of greater camber allows for the operation of certain objects. This theorem explains the changes that happen to certain molecules inside a Venturi tube. If there is no vertical change in height, the equation for this law simplifies to one half the density times velocity squared plus the pressure. This principle states that an increase in fluid velocity results in a decrease in fluid pressure. For 10 points, name this principle devised by a Swiss mathematician that helps explain the ability of airplanes to achieve lift.

ANSWER: **Bernoulli's** Principle [or **Bernoulli's** Equation; or **Bernoulli's** Theorem; or **Bernoulli's** Law]

023-10-20-09122

7. This ruler saw a number of his family members murdered during an army rebellion that, with a later rebellion by the same group, may have influenced him to disband that army, the streltsy. This man worked as a ship's carpenter in the Netherlands during his journey west in the Grand Embassy. One method this leader used to force changes on his country's boyars was through a beard tax. This ruler built a "window to the west" on the Neva River called St. Petersburg. For 10 points, name this westernizing tsar of Russia.

ANSWER: **Peter the Great** [or **Peter I** of Russia; or **Pyotr Veliky**; or **Pyotr Alekseyevich**; prompt on **Peter**]

023-10-20-09123

8. Spin-spin coupling and chemical shift are observed in a phenomenon that takes advantage of the half-spin of these particles, a namesake form of NMR. The function of ATP synthase requires the movement of these particles through a "pump." An extra one belonging to a molecule of water results in a hydronium ion. The letter Z represents the number of these particles in a single atom; in several isotopes of one atom, the number of these particles stays the same. For 10 points, identify this positive particle found in the nucleus.

ANSWER: **protons**

020-10-20-09124

9. A house that burns down in this novel belongs to the optimistic Maudie Atkinson. A mob in this work is broken up by the father of Walter Cunningham. The father of the main character in this work begins to take heat for choosing to defend Tom Robinson. The protagonist of this novel and her brother become friends with Dill, who sparks their interest in Boo Radley. Set in Maycomb, Alabama, this work portrays Jem, Scout, and Atticus Finch. For 10 points, name this only novel published by Harper Lee.

ANSWER: ***To Kill a Mockingbird***

023-10-20-09125

10. While working as a drug dealer, this man was known as "Detroit Red." This man was forced to remain silent for 90-days after claiming that the assassination of John F. Kennedy was an example of the "chickens coming home to roost." He criticized the March on Washington in his "Message to the Grass Roots" speech. This husband of Betty Shabazz founded the newspaper *Muhammad Speaks* for a movement that was led by Elijah Muhammad. For 10 points, name this leader of the Nation of Islam whose autobiography was dictated to Alex Haley.

ANSWER: **Malcolm X** [or Malcolm **Little**]

030-10-20-09126

11. The Yamana are the only still extant native tribe from this region. Though not in Mexico, this region includes Lapataia and Ensenada Bays. One mountain range in this region is known as the Cordillera Darwin. The city of Ushuaia in this region calls itself the "End of the World," lies on the Beagle Channel, and is the southernmost city in the world. For 10 points, name this region between the Strait of Magellan and the Drake Passage, which is split between Chile and Argentina and whose name literally means "land of fire."

ANSWER: **Tierra del Fuego**

003-10-20-09127

12. This inventor of a drum tuning system was once a jazz drummer who went by the name "Bud." In one film appearance, this actor described his "dream, his nightmare" of a snail crawling "along the edge of a straight razor." He donned an iconic tight T-shirt to play Stanley Kowalski in *A Streetcar Named Desire*. This actor played Kurtz in *Apocalypse Now* and uttered the line "I'm gonna make him an offer he can't refuse" in another role. For 10 points, name this actor who portrayed Vito Corleone in *The Godfather*.

ANSWER: Marlon **Brando** Jr.

026-10-20-09128

13. The next version of this language has the designation 0x (zero x). One important part of this language is templates and it supports references. One can manage memory in it by using the delete and new operators. In it, one can print to the standard output using cout. Unlike its ancestor, this language supports classes. For 10 points, name this programming language whose name reflects that it is a step up from its predecessor, C.

ANSWER: **C++**

001-10-20-09129

14. In many stories, this object is kept safe at Corbenic. The Dolorous Stroke maimed this object's keeper, the Fisher King. According to legend, this object could only be discovered by the man who could sit in the Siege Perilous without dying, and was taken to England by Joseph of Arimathea. According to Thomas Malory, it was finally attained by Sir Galahad. For 10 points, name this cup used by Jesus at the Last Supper, which many of the knights of King Arthur's Round Table went on a quest to find.

ANSWER: the **Holy Grail**

004-10-20-09130

15. KASH and SUN domains bridge this structure. Lamin proteins, which organize this structure's breakdown during mitosis, form the "lamina" just inside this structure. This structure breaks down in prophase, when chromatin begins to condense into chromosomes. For 10 points, name this membrane, often called an "envelope," that encompasses an organelle that is the "control center of the cell."

ANSWER: the **nuclear membrane** [or or **nucleus membrane**; or **nuclear envelope**; or **NE**; or **nucleolemma**; or **karyotheca**; or **nucleus** before lamin]

026-10-20-09131

1. These things are commonly formed in vadose zones. Their cross-sectional area can be found using Darcy's Equation. Two notable ones in the United States are called the Mahomet and Ogallala. Pressure causes water to flow from them in an artesian well. For 10 points, name these porous rock formations that store ground water.

ANSWER: **aquifers**

079-10-20-09132

2. The "den" and "tan" suffixes indicate this case in Turkish, while in Greek it does not exist as it was subsumed into the genitive case early in development. In Latin, this case is used in a construction that is often translated "with the noun having been verbed," its "absolute." It can take endings such as a long "a" in first declension. For 10 points, identify this noun case that shows instrumentation, manner, or circumstance.

ANSWER: **ablative** case

019-10-20-09133

3. The protagonist of this novel works for a small amount of time with Lucius Brockway. A policeman in this work kills Tod Clifton, whom the narrator sees selling Sambo dolls on the street. Another character in this work goes from being called the Exhorter to being called Ras the Destroyer. This novel starts with its main character's description of his room filled with 1,369 light bulbs. For 10 points, name this work about an unnamed, black title character written by Ralph Ellison.

ANSWER: ***Invisible Man***

023-10-20-09134

4. This man composed a piece based on a Theodore Roosevelt speech in which Roosevelt preached the virtues of strife. In addition to "The Strenuous Life," this man composed an opera whose title figure was saved by Remus from being thrown into a wasp nest after protesting against her mother buying a "bag of luck." That work was *Treemonisha*. Interest in his music was increased after several of his works, such as "The Entertainer," were featured in the film *The Sting*. For 10 points, name this American composer, the "King of Ragtime."

ANSWER: Scott **Joplin**

030-10-20-09135

5. The prologue to Shakespeare's *Henry V* calls for one of these entities "of fire" that "would ascend the brightest heaven of invention." In Book One of *Paradise Lost*, John Milton asks one of these entities to help him "justify the ways of God to man." Epic poems traditionally begin with the author asking one of these beings for literary inspiration. For 10 points, name this group of beings that include Terpsichore (terp-SICK-uh-ree), Erato, and Calliope, the Greek goddesses of art and literature.

ANSWER: **muses**

004-10-20-09136

This is a 10-second calculation question. What is the circumference of a circle whose area is 4 pi?

ANSWER: **4 pi**

004-10-20-09137

Name the Armenian composer who included the "Sabre Dance" in his ballet *Gayane*.

ANSWER: Aram **Khachaturian**

004-10-20-09137