



1. A domed stadium in this city known as the "Big Egg" was, until 2004, the home field of a team called the Ham Fighters. It suffered numerous casualties in Operation Meetinghouse, which resulted in over 100,000 people's ashes being interred in Sumida Ward. In 1995, this city, which has the tallest freestanding tower in the world, had its subway system victimized by a terrorist attack perpetrated by the cult Aum Shinrikyo. The Imperial Hotel here survived the 1923 Great Kanto Earthquake. This is the largest city on the island of Honshu. For 15 points, name this capital of Japan.

ANSWER: Tokyo

052-13-104-01101

BONUS: What Shakespeare play begins with the line, "If music be the food of love, play on?"

ANSWER: Twelfth Night

014-13-104-0110-11

2. This philosopher discussed the painting "A Pair of Shoes" by van Gogh in his article *The Origin of the Work of Art*. He examined another German philosopher in *Kant and the Problem of Metaphysics*. In another book, he introduces the idea of a "hermeneutic circle" and discusses the relationship that human perception creates with the world, composed of the words for "to be" and "there." For 15 points, name this German philosopher who explained "dasein" (DAH-sine) in *Being and Time* and attracted controversy for his Nazi sympathies.

ANSWER: Martin Heidegger

127-13-104-01102

BONUS: What astronomer names a constant describing the rate of expansion of the universe?

ANSWER: Edwin Hubble

014-13-104-0110-11

3. This mountain was first climbed by Edwin James, who described seeing the blue columbine during the climb. Its namesake was killed in the Battle of York during the War of 1812 and had previously explored the west on orders of James Wilkinson. Katharine Lee Bates wrote the song "America the Beautiful" after admiring the view from this mountaintop. During the "Fifty-Niner Gold Rush," miners used a slogan advocating this mountain "or bust." For 15 points, name this peak in the Rocky Mountains, which is named for an explorer whose first name was Zebulon.

ANSWER: Pike's Peak

052-13-104-01103

BONUS: This is a 30-second calculation question. An isosceles trapezoid has one base 8 centimeters long and the other 14 centimeters long. If the other two sides are each 5 centimeters long, what is the area of the trapezoid?

ANSWER: 44 square centimeters

003-13-104-0110-11

4. A scene in this book depicts an Ethiopian eunuch reading the book of Isaiah in his chariot. This book describes a council held in Jerusalem where James the Just decrees that some groups may be excluded from circumcision. It recounts the descent of the Holy Spirit on Pentecost. This book is thought to have been written by the author of the Gospel of Luke. Matthias replaces Judas near the beginning of this book. For 15 points, name this fifth book of the New Testament, which describes what the apostles did after the Resurrection.

ANSWER: **Acts** of the Apostles [prompt on the **New Testament** until "Luke" is read; prompt on the **Bible** until "Luke" is read]

014-13-104-01104

BONUS: What instrument was played by Mstislav (MIS-tee-slav) Rostropovich and is still played by Yo-Yo Ma?

ANSWER: **cello**

015-13-104-0110-11

5. This author wrote a novel in which the title character accidentally causes Chicken Little to drown and becomes hated by everyone in a neighborhood called the Bottom. In another novel by this author, Stamp Paid takes a character across the Ohio River after she escapes from the Sweet Home plantation. That novel by this author describes how the mother of Denver killed her baby to save it from going back into slavery. For 15 points, name this American author of *Sula* who also created Sethe (SETH-uh) in *Beloved*.

ANSWER: Toni **Morrison** [or Chloe Anthony **Wofford**]

023-13-104-01105

BONUS: What Greco-Roman resident of Alexandria created a complicated geocentric model of the universe using "epicycles?"

ANSWER: **Ptolemy** (TAH-luh-mee)

014-13-104-0110-11

6. A character in this novel refuses to lie down on the bottom of a boat because it goes against his military training. General Webb is the incompetent commander of Fort Edward in this novel, and much of it centers on Major Duncan Heyward's journey to take the Munro sisters to their father at Fort William Henry. Magua is shot at the conclusion of this book, in which Uncas is the title character. For 15 points, name this novel in which Natty Bumppo is known as Hawkeye, a work by James Fenimore Cooper.

ANSWER: *The **Last of the Mohicans***

030-13-104-01106

BONUS: What son of Odysseus sought help from Menelaus (MEN-uh-LAY-us) and helped his father massacre Penelope's suitors?

ANSWER: **Telemachus**

014-13-104-0110-11

7. Although not carbon, the ring in the structure of lipoic acid contains two atoms of this element bonded to each other. Aconitase is an example of an enzyme in which atoms of this element form complexes with iron. The tertiary structure of proteins is helped in part by bonds between two atoms of this element, which is found in the amino acids methionine and cysteine. Anaerobic respiration in some bacteria releases a rotten-smelling molecule comprised of an atom of this element bonded to two hydrogens. For 15 points, name this element with atomic symbol S.

ANSWER: **sulfur** [or **S** until it is read]

140-13-104-01107

BONUS: What Greek letter denotes electrostatic potential in physics and the golden ratio in mathematics?

ANSWER: **phi** [do not accept "pi"]

014-13-104-0110-11

8. Near the end of this novel, Sister Gudule (goo-DOOL) discovers that she is the mother of a woman about to be executed for murdering Captain Phoebus. A goat named Djali accompanies a major character in this novel. Claude Frolo raises this novel's title character and becomes obsessed with a gypsy named La Esmerelda. The title character of this novel is elected "Pope of Fools" at the beginning for being the ugliest person in Paris. For 15 points, name this Victor Hugo novel about Quasimodo, a bellringer in the title cathedral.

ANSWER: *The Hunchback of Notre Dame* [or *Notre-Dame de Paris*]

080-13-104-01108

BONUS: In statistics, what name is given to the default hypothesis which states that no relationship exists between two measured variables and which the experimenter seeks to reject?

ANSWER: null hypothesis [or H naught; or H sub zero]

014-13-104-0110-11

9. A type of silicon prefixed by this term is a common gate material for MOSFETs (MOSS-fets). Materials whose name contains this prefix can be connected with cross-linking, and their size can be described by their "molecular weight," which is proportional to the amount of repeating subunits. The "tail" of adenine (AA-deh-noon) nucleotides added to mRNA is prefixed by this term. In math, a term with this prefix denotes linear combinations of variables raised to non-negative integer powers, examples of which include cubic and quartic ones. For 15 points, what is this Greek prefix meaning "many?"

ANSWER: poly

233-13-104-01109

BONUS: What NBA team made the 2013 Eastern Conference Finals through strong performances from Paul George and Roy Hibbert?

ANSWER: Indiana Pacers [or Indiana Pacers]

015-13-104-0110-11

10. These objects are slowed by viscous drag in a dashpot. They are described by a second-order differential equation with characteristic frequency equal to the square root of  $k$  over  $m$ . A mass hanging from one of them will be displaced by a distance of  $m g$  over  $k$ . The restoring force on these objects is proportional to the displacement in their total length according to Hooke's law, making them harmonic oscillators. For 15 points, name these metal coils that store energy by being stretched or compressed.

ANSWER: springs [prompt on simple harmonic oscillators until it is read]

132-13-104-01110

BONUS: What name did Andy Warhol give to his New York studio?

ANSWER: the Factory

015-13-104-0110-11

11. In Jean-Antoine Watteau's painting *Pierrot*, a man of this profession can be seen with a donkey. A member of this profession, Franklin West, is taking notes in a painting that depicts a woman shielding her eyes. A melancholy man rests his face on his hand in Van Gogh's portrait of one of these men, Paul Gachet (guh-SHAY). In another painting, a man from this profession holds a needle near the corpse of the executed robber Aris Kindt. For 15 points, name this profession of Rembrandt's subject Nicolaes Tulp and Samuel Gross, whose clinic was depicted in a painting by Thomas Eakins.

ANSWER: doctor [or equivalents, such as physician]

030-13-104-01111

BONUS: What ancient Greek tragedian wrote *Oedipus at Colonus* and *Oedipus Rex*?

ANSWER: Sophocles

014-13-104-0110-11

12. This speech praises John Serrano for giving one of his pizzeria employees a raise, and it compares bad workplace policies to an episode of *Mad Men*. This speech ends with a long story about wounded soldier Cory Remsburg, and it begins by claiming that America, not China, is now "the world's number one place to invest." It was responded to by multiple people, including Cathy McMorris Rodgers and, representing the Tea Party, Mike Lee. For 15 points, name this January 28, 2014, speech given to a joint session of Congress by Barack Obama.

ANSWER: the 2014 **State of the Union** Address

002-13-104-01112

BONUS: This is a 20-second calculation question. I have a perfectly spherical scoop of ice cream, with radius 1 unit, that will be slowly melting into an ice cream cone, also with radius 1 unit. If the cone can contain the entire volume of melted ice cream, what is the minimum height of the cone?

ANSWER: **4** units

003-13-104-0110-11

13. This poem begins with the word "Andra," meaning "the man." The protagonist of this poem angrily reminds Eurycleia (yur-uh-CALY-uh) that he built his bridal bed around the immobile stump of an olive tree. On Phaeacia (fye-EY-kih-uh), the protagonist of this poem tells Nausicaa's father of his encounters with the Laestrygonians (LYE-struh-GOH-nee-unz) and Lotus Eaters. At the beginning of this poem, Athena takes the form of Mentor to guide Telemachus, who is angry at the suitors of his mother, Penelope. For 15 points, name this poem about a Greek king's return from Troy to Ithaca.

ANSWER: *The **Odyssey***

080-13-104-01113

BONUS: What ABC thriller created by Shonda Rhimes stars Kerry Washington as political fixer Olivia Pope?

ANSWER: **Scandal**

015-13-104-0110-11

14. William Duer was invited to write some of these texts, but his work was found lacking. John Marshall supported using them for interpreting the laws in *McCulloch v. Maryland*. George Clinton attacked these essays under the pen name "Cato." The tenth of them argues against the belief that republics cannot be large, explaining that rival factions will counteract each other. For 15 points, name this series of essays defending the Constitution, written by John Jay, James Madison, and Alexander Hamilton.

ANSWER: the **Federalist** Papers

121-13-104-01114

BONUS: What bone of the human thigh is the longest in the body?

ANSWER: **femur**

014-13-104-0110-11

15. The title character of a novel by this author is taken to Doune (DOON) Castle after being rescued by the Mac-Ivor clan. This author's formerly popular narrative poems include *The Lady of the Lake* and *Marmion*. He wrote about Jeanie and Effie Deans in his novel *The Heart of Midlothian* and created Rowena and Cedric of Rotherwood in his most famous novel. For 15 points, name this Scottish historical novelist of *Waverley* and *Ivanhoe*.

ANSWER: Walter **Scott**

014-13-104-01115

BONUS: What Shoshone (shuh-SHOW-nee) woman served as a translator and guide for the Lewis and Clark Expedition?

ANSWER: **Sacajawea**

015-13-104-0110-11

16. This word describes a type of anucleated (EY-nook-lee-ate-ed) tube element used to transport carbohydrates through the phloem of vascular plants, as well as the plate that separates those tube elements. In chemistry, microporous alumino-silicates called zeolites (ZEE-oh-lites) act as a molecular type of this device. An ancient algorithm for finding prime numbers by systematically crossing out multiples of primes is named for one of these things of Eratosthenes (air-uh-TOSS-thuh-neeZ). For 15 points, name this device that can be used to mechanically separate tiny solids from liquids.

ANSWER: **sieve**

245-13-104-01116

BONUS: This is a 30-second calculation question. If test scores are normally distributed with mean 50 and standard deviation 10, then, to the nearest percent, what percentage of students scored 40 or better?

ANSWER: **84** percent

003-13-104-0110-11

17. A location of this type features statues of Charity, Prudence, Justice, and Truth, the latter of which rests her foot on the location of England on a globe. Another location of this type was initially intended to be located in St. Peter's Basilica, but came to be placed in the church of San Pietro in Vincoli. Several of these monuments were situated in a namesake crypt in the Catacomb of Callixtus, which is one of the Catacombs of Rome. For 15 points, identify these monuments, two of which were sculpted by Bernini and Michelangelo, for Alexander VII and Julius II.

ANSWER: **tombs** of **Popes** [or equivalents; prompt on partial answer]

189-13-104-01117

BONUS: This is a calculation question. How many unique, real roots satisfy the equation  $x^2 - 7x + 13 = 0$ ?

ANSWER: **zero**

003-13-104-0110-11

18. This poet asserted, "If the doors of perception were cleansed, every thing would appear to man as it is, infinite." This author's long poems include *Visions of the Daughters of Albion* and *Jerusalem*, both examples of his illuminated "prophecies." He included lyrics such as "The Poison Tree" and "The Sick Rose" in his *Songs of Innocence and of Experience*, one of which describes a creature "burning bright." For 15 points, name this English poet of "The Chimney Sweeper," "The Lamb," and "The Tyger."

ANSWER: William **Blake**

014-13-104-01118

BONUS: What nineteenth-century American poet wrote "To a Waterfowl" and "Thanatopsis?"

ANSWER: William Cullen **Bryant**

014-13-104-0110-11

19. One of these characters kills his rival Trampas in Owen Wister's *The Virginian*, and another of these characters is arrested by evil Mormons led by Elder Tull in a Zane Grey novel. Cormac McCarthy wrote a trilogy about one of them named John Grady Cole, who appears in *All the Pretty Horses*. Annie Proulx described a homosexual relationship between two of them, Jack Twist and Ennis Del Mar, in the story "Brokeback Mountain." For 15 points, name these characters who bear ten-gallon hats and lassos in Western novels.

ANSWER: **cowboys**

080-13-104-01119

BONUS: This is a 30-second calculation question. Tommy walks a certain distance around a circular track. Evan walks, at the same speed, from the same starting point to the center of the track and then to a different point on the edge of the track. If Evan exactly meets up with Tommy again, then at what angle, in degrees, must Evan turn when he reaches the center? Express your answer in terms of pi.

ANSWER: **360/pi** degrees

003-13-104-0110-11

20. This concept is the first word in the title of a Sigmund Freud book that explains why the homosexual Dora feels revolted by Herr K. The "latent" form of this concept results from exposure to the conditioned stimulus before beginning a classical conditioning experiment. Clark Hull theorized a "reactive" form of this concept. If an animal learns that the presence of a conditioned stimulus signifies the lack of the unconditioned stimulus, this form of conditioning is said to have occurred. For 15 points, name this suppression of behavior that is contrasted in conditioning with excitation.

ANSWER: **inhibitions** [or **inhibitory**]

003-13-104-01120

BONUS: What longest river in Poland flows through Gdansk (guh-DONSK) and Warsaw?

ANSWER: **Vistula** River

015-13-104-0110-11

21. This disease was the subject of a scandal discussed in *The Drum* and exposed by Peter Buxtun. A 1972 expose by the *Washington Star* discussed 399 men with this disease, which spurred the passage of the National Research Act of 1974 and the rise of institutional review boards. This disease was given to Macon County sharecroppers who were told they had "bad blood" and denied penicillin. For 15 points, name this disease, the subject of an unethical study on black men conducted at the Tuskegee Institute.

ANSWER: **sypilllis**

019-13-104-01121

BONUS: What term is used to describe the novels of Gabriel Garcia Marquez and Toni Morrison, which incorporate fantastical elements into a naturalistic narrative?

ANSWER: **magical realism**

014-13-104-0110-11

22. A crucial part of these devices is made by Nichols Electronics. Thomas Campbell and Joe Steele were convicted for their role in a 1980s Glasgow war, where these items were used to transport drugs. Michael Moore reads the PATRIOT Act from one of these things in *Fahrenheit 9/11*. Borat buys one of these conveyances, but then scares some children when his bear sticks its head out the window. They often play songs like *The Entertainer* and *Turkey in the Straw* to attract customers. For 15 points, name these vehicles that sell frozen treats.

ANSWER: **ice cream truck** [or **ice cream van**]

001-13-104-01122

BONUS: What British monarch presided over the British presence in the Crimean War during her sixty-three year reign?

ANSWER: Queen **Victoria**

015-13-104-0110-11

23. Channels that are selective for this substance have an aromatic-arginine filter and were discovered by Peter Agre. Bdelloid (DEH-lloyd) rotifers and tardigrades can enter a cryptobiotic state when this substance is unavailable. A molecule of this substance is released during the formation of a peptide bond, and this substance promotes the formation of lipid bilayers because the tails of phospholipids avoid it but the heads interact with it. For 15 points, name this substance which makes up 53% of the human body and has formula H<sub>2</sub>O.

ANSWER: **water** [or **H<sub>2</sub>O** until it is read]

048-13-104-01123

BONUS: What U.S. Secretary of State gave a seemingly unscripted proposal that temporarily ended a tense standoff over Syrian chemical weapons in 2013?

ANSWER: John **Kerry**

015-13-104-0110-11

24. This man's son, who was known as "Castor," was probably poisoned by his wife, Livilla. This emperor eventually named Macro as the new head of the Praetorian Guard. This father of Drusus was in power when such people as Agrippina (ag-rip-EE-nuh) the Elder were purged by his scheming adviser, Sejanus (seh-JAH-nus). This emperor was the adoptive father of Germanicus and spent much of his later reign "retiring" on the island of Capri. During his reign, Jesus Christ was crucified. For 15 points, name this second Roman emperor, the stepson and successor of Augustus.

ANSWER: **Tiberius** Claudius Nero [or **Tiberius** Julius Caesar]

052-13-104-01124

BONUS: The sun is part of what populous branch of the Hertzsprung-Russell diagram that stretches from the bottom-right to the top-left?

ANSWER: **main sequence**

014-13-104-0110-11

25. At the beginning of this novel, an old man spreads gossip about a young woman lying on the back of a red-dleman's wagon, after which it is found that she ran away before her marriage. The marriage of Wildev and Thomasin is facilitated early in this novel. The title character's mother dies of snakebite in this novel, followed soon by his wife Eustacia Vye, who drowns while trying to escape rural life. For 15 points, name this novel that describes Clym Yeobright's arrival in his hometown of Egdon Heath, a work by Thomas Hardy.

ANSWER: *The **Return of the Native***

140-13-104-01125

00--20-0110-11

26. These events can be quantified on the INES (I N E S) scale, and the Liquidators were a group of people who responded to one of these events. President Carter created the Kemeny Commission to investigate one of these events that occurred near the Susquehanna River. These events release the isotopes iodine-131 and cesium-137. For 15 points, identify these disasters in which a fission plant overheats and releases radiation into the environment, exemplified by the Chernobyl incident.

ANSWER: **nuclear** power plant **meltdown** [or **nuclear** power plant **disaster**, etc.]

234-13-104-01126

00--20-0110-11



27. In many countries, this subject is replaced by the "voseo" (voh-SAY-oh). In Spanish, affirmative commands with this subject connect the direct object to the end of the verb, and are usually conjugated with the third-person singular present tense. In the preterite (PRET-uh-rit), verbs with this subject end in "-aste" (AH-stay) or "-iste" (EE-stay). This subject should be used instead of "usted" (oo-STED) only in informal situations. For 15 points, identify this second-person singular subject, the Spanish word for "you."

ANSWER: tú

190-13-104-01127

00--20-0110-11

28. This organ is converted into a surrogate urinary bladder in the Mitrofanoff procedure. A "meso" form of this organ functions primarily as a lymphatic structure. Darwin related this organ's function to the cecum's in animals, and defects in this organ have been shown to increase *C. difficile* infection rates. The Alvarado score can indicate defects in this organ, and pain at McBurney's point is often used to indicate that this organ is inflamed. For 15 points, identify this worm-shaped, possibly vestigial, organ that is connected to the colon and is surgically removed when swollen.

ANSWER: vermiform **appendix** [or cecal **appendix**; or **vermix**]

234-13-104-01128