



1. Prior to the actions of this play, one character informs the antagonist that he possesses a box of incriminating letters. That antagonist tries to seduce the married Elmire before her son leaps out from under a table. The antagonist is promised the hand of Mariane, even though she is engaged to Valere. A messenger of the king appears at the conclusion of this work and prevents Orgon from losing his property after being duped by a clever vagrant. For 10 points, name this comedy by Moliere about a religious hypocrite.

ANSWER: Tartuffe, or the Imposter

230-13-93-09101

2. This man built on the work of Willem Barents while working for the Muscovy Company, and he used logbooks of George Weymouth and John Smith to try to find the Northwest Passage on behalf of the Dutch East India Company. This commander of the *Half Moon* and *Discovery* was abandoned on a raft after a 1611 mutiny. For 10 points, identify this explorer who now lends his name to a river in New York and a bay in Canada.

ANSWER: Henry Hudson

019-13-93-09102

3. The protagonist of this novel is abandoned by her children, Howard and Buglar. Paul D is horrified at this book's main character when she talks about "trying to put her babies where they would be safe." Its protagonist, Sethe, lives at 124 Bluestone Road, Cincinnati, and killed the title character after fleeing from the Sweet Home plantation. For 10 points, name this Toni Morrison novel whose title character returns as a ghost after being killed by her mother to save her from slavery.

ANSWER: Beloved

052-13-93-09103

4. After firing Tyrone Willingham, this school failed to entice its former wide receivers coach Urban Meyer. A student here named Declan Sullivan died after falling off a scissor lift in heavy winds. Its current quarterback is Tommy Rees, who was recruited by Charlies Weiss but now plays under Brian Kelly. This school, which was attended by Manti T'eo, is the setting for the film *Rudy*. For 10 points, name this Catholic school in South Bend, Indiana.

ANSWER: University of Notre Dame

015-13-93-09104

5. Max Brod published this author's manuscript about the arrest for an unknown crime and execution of the banker Josef K. This author of *The Trial* created a character in a short story whose sister plays violin and whose father throws an apple that lodges into the character's back. That story by this author starts with Gregor Samsa waking up to find he has turned into a giant insect. For 10 points, name this author from Prague who wrote the story *The Metamorphosis*.

ANSWER: Franz Kafka

023-13-93-09105

6. Test subjects resembling these animals are the result of Soviet geneticist Dmitry Belyaev's ongoing breeding experiments. Because these animals possess a ligament connecting their chest vertebrae to the back of the second cervical bone, they expend less energy when running long distances. Because these animals can taste sweetness, they are incredibly susceptible and vulnerable to theobromine poisoning from eating chocolate. These animals regulate their body temperature by panting. For 10 points, name these animals, the domesticated relatives of foxes and wolves.

ANSWER: **dogs** [or *Canis lupis familiaris*; or any word form involving **canines**]

020-13-93-09106

7. This is the order of the smallest non-abelian group. This is the smallest number  $n$  greater than one which divides  $n$  minus one factorial. The densest way to pack circles in a plane is to have each of them touch this many other circles. The dual polyhedron of the cube has this many vertices, and this is the smallest perfect number. This is the number of permutations of 3 elements, because it equals 3-factorial. For 10 points, give this number of faces of a cube and sides of a hexagon!

ANSWER: **6**

233-13-93-09107

8. In September 2013, this country's prime minister rejected a secessionist vote proposed by Artur Mas after a human chain was made by a million people. In the same month, this country's prime minister invoked the 1984 Brussels Agreement in the General Assembly and called on Great Britain to give up Gibraltar. For 10 points name this country led by Prime Minister Mariano Rajoy and King Juan Carlos I.

ANSWER: Kingdom of **Spain** [or Reino de **Espana**]

153-13-93-09108

9. This character's mother died of scarlet fever shortly before he left for the university. He is temporarily imprisoned for the murder of his best friend, Henry Clerval. This man dies after telling his story to Captain Walton, who found him near the North Pole. This man, who is known as the "Modern Prometheus," loves Elizabeth, who is murdered by his creation after he refuses to create a female creature. For 10 points, name this title character of a Mary Shelley novel, a scientist who creates a monster.

ANSWER: Victor **Frankenstein** [or **Victor**]

052-13-93-09109

10. In one of this author's plays, the protagonist confides to Mitch how her former husband Allan Grey committed suicide. In one play, this man wrote about Amanda Wingfield's desire to find a "gentleman caller" for her daughter Laura. This author also wrote a play that focuses on a woman who has "always depended on the kindness of strangers." That character is Blanche Dubois. For 10 points, name this American playwright of *The Glass Menagerie* and *A Streetcar Named Desire*.

ANSWER: Tennessee **Williams** [or Thomas Lanier **Williams III**]

186-13-93-09110

11. Four times this quantity times mutation rate gives the parameter theta. The Chapman estimator is commonly used in one technique to measure this quantity, which involves tag, release, and recapture. Hardy-Weinberg equilibrium assumes it to be infinite. The change in this quantity over time is given by the Logistic equation, and Malthus predicted dire consequences if this value became too high for humans. For 10 points, name this value for a given environment is maximal at the carrying capacity.

ANSWER: **population** size [or obvious equivalents, such as how large a **population** is]

048-13-93-09111

12. This politician introduced the second reading of the Coal Mines Regulation Act, which limited miners to eight-hour workdays. This prime minister appointed Ernest Bevin as minister of labor and gave a speech that said he had "nothing to offer but blood, toil, tears, and sweat." This man's predecessor reached the Munich Agreement as part of a policy of appeasement. For 10 points, name this prime minister who succeeded Neville Chamberlain to lead Britain during World War II.

ANSWER: Winston Leonard Spencer **Churchill**

023-13-93-09112

13. This philosopher's ideas were supported after his death by Mencius and attacked by Mozi. This man's philosophy included the idea that parent and child and ruler and minister were two of the five basic relationships. This philosopher's concept of goodness, called ren, included showing respect for elders and engaging in filial piety. For 10 points, name this Chinese philosopher who worked on the Five Classics and whose sayings were collected in the *Analects*.

ANSWER: **Confucius** [or **Kongfuzi**; or **Kongzi**; or **Kongqiu**]

023-13-93-09113

14. A post-credit scene for this movie shows Hannibal Chau wondering where one of his gold-plated shoes has gone. Yancy's death leads the main character of this movie to work on a defensive wall. Hermann Gottlieb and Newton Geiszler are scientists who study certain creatures in this movie. Stacker Pentecost runs the Jaeger forces, which fight Kaijus in this movie. For 10 points, name this 2013 Guillermo del Toro movie in which large manned robots fight against giant extraterrestrial monsters.

ANSWER: **Pacific Rim**

023-13-93-09114

15. This man wrote that "harmonious madness" would flow from his lips in a poem where he requests to learn "half the gladness" of the title animal. This author wrote about "two vast and trunkless legs of stone" that "stand in the desert." In that one of his poems, a traveler sees a colossal wreck with the inscription "Look on my works, ye Mighty, and despair!" This man praised the title bird in a poem that begins "Hail to thee, blithe spirit!" For 10 points, name this British poet of "To a Skylark" and "Ozymandias."

ANSWER: Percy **Shelley**

052-13-93-09115



1A. What poem by William Butler Yeats ends with the speaker wondering “what rough beast... Slouches towards Bethlehem to be born?”

ANSWER: “The **Second Coming**”

1B. What phase change occurs when a solid turns directly into a gas without becoming a liquid?

ANSWER: **sublimation**

2A. What series of elements shrink as their atomic number increases in a namesake "contraction" and begin with element 57?

ANSWER: **lanthanides**

2B. What type of curve is traced out by a point on a circle that is rolling on a line?

ANSWER: **cycloid** [prompt on "roulette"]

3A. What leader of the Huns may have killed his brother Bleda and was defeated by Flavius Aetius and Theodoric at the Battle of Chalons?

ANSWER: **Attila** the Hun

3B. What glacially formed accumulation of debris has among others, ground, lateral, and terminal types?

ANSWER: **moraines**

4A. This is a 20-second calculation question. If a fair coin is flipped 500 times, what is the expected number of heads that will appear?

ANSWER: **250**

4B. This is a 20-second calculation question. Find the maximum value of the function  $f$  of  $x$  equals 2 times sine  $x$  times cosine  $x$ .

ANSWER: **1**

5A. What language is written in the "hangul" alphabet derived by King Sejong?

ANSWER: **Korean**

5B. Name the contest won in 2013 by Denmark’s Emmelie de Forest, in 2009 by Norway’s Alexander Ryback, and in 1974 by Sweden’s ABBA, who sang “Waterloo”.

ANSWER: **Eurovision** Song Contest [or Concours **Eurovision** de la chanson]

6A. What instrument did the jazz musician Louis Armstrong play?

ANSWER: **trumpet** [or **cornet**]

6B. *King Lear* includes a famous example of what type of stock character from Elizabethan drama, who often speaks in a witty and humorous manner?

ANSWER: **fool** [or **clown**]

7A. Name the national monument in South Dakota that was built by Gutzon Borglum.

ANSWER: Mount **Rushmore**

7B. Name the concept referring to the usage of multiple CPUs or cores to carry out a computational thread or program.

ANSWER: **parallel** processing [accept word forms]

8A. What type of bird abducted Ganymede and formed the head and wings of a gryphon?

ANSWER: **eagle**

8B. 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]

9A. Caravaggio was a practitioner of what painting technique, in which light and dark are highly contrasted?

ANSWER: chiaroscuro

9B. What German scientist names two circuit laws, one of which says that the sum of currents into and out of a node is zero?

ANSWER: Gustav Kirchhoff

10A. This is a 30-second calculation question. Given the equation cosine squared of x minus one-fourth equals zero, give all possible values for x, in radians, between negative pi over two and three pi over two.

ANSWER: negative pi over three, pi over three, two pi over three, and four pi over three

10B. This is a 30-second calculation question. The quadrilateral ABCD is inscribed in a circle. Points B and D are not directly connected by a line segment. If Angle B is twice Angle D, what is the measure of Angle D, in degrees?

ANSWER: 60 degrees



1. This state's city of Bartlesville celebrates a Mozart music festival. This state's Cavanal Hill is billed as the tallest hill in the world. The Beaver and Cimarron counties are part of this state's panhandle. This state's capital city contains a memorial that remembers the victims of a 1995 bombing. This state lies north of the Red River, while the Arkansas River flows past its cities of Brown Arrow and Tulsa. For 10 points, name this "Sooner State," which lies north of Texas.

ANSWER: **Oklahoma**

140-13-93-09117

2. This man became next in line to his country's throne a few years after the suicide of his cousin Rudolf in Mayerling. He had to promise not to pass succession on to his children in order to marry Sophie Chotek. This man was the presumptive heir to Franz Joseph until he was killed on the Latin Bridge in Sarajevo, precipitating the July Crisis. For 10 points, name this Austrian archduke whose assassination by Gavrilo Princip sparked World War I.

ANSWER: Archduke **Franz Ferdinand**

121-13-93-09118

3. Calcium deposits are found in these structures in a disease named for Monckeberg. Foam cells, or macrophages that have taken up oxidized-LDL, often adhere to the walls of these structures. The brachiocephalic and left subclavian ones "arch" off the largest of these structures, which has an ascending and a descending part. The wall of these valveless structures thickens and hardens when triglycerides and cholesterol accumulates. The pulmonary one carries deoxygenated blood to the lungs, while all others carry oxygenated blood to the body. For 10 points, name these blood vessels, the counterpart to veins.

ANSWER: **arteries** [or **artery**]

020-13-93-09119

4. The first holder of this office consolidated power in the Ridda Wars. One holder of this office established the *diwan* and conquered the Persian Empire. Another holder of this office led the written compilation of a holy text but was killed by rebels in Medina. That holder of this office, Uthman, was succeeded by a man considered by Shiites to be the first imam. For 10 points, name this office held by the successors of Muhammad, the first four of whom are known as the "Rightly Guided" of these.

ANSWER: **caliph** [or **khalifah**; or **Rashidun**; or **Rightly Guided Caliphs** before mention]

105-13-93-09120

5. A thiazole ring contains one atom of nitrogen and this element and is an important component of thiamine. Chemotrophs at hydrothermal vents often use a compound consists of two hydrogens and this element as an energy source. The only amino acids to contain this element are cysteine and methionine. This element is paired with C, H, N, O, and P as one of the six most common elements in living organisms. Emissions of nitric oxide and this elements dioxide can cause acid rain. For 10 points, identify this element with symbol S.

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

066-13-93-09121

6. One person with this last name organized the founding of the Society of the Cincinnati. William Howard Taft's Secretary of State with this last name helped him to develop the "Dollar Diplomacy" policy. That Secretary of State was Philander. During the Revolutionary War, a former bookseller with this last name organized the hauling of cannons from Fort Ticonderoga to Boston. For 10 points, give the last name for the first Secretary of War Henry.

ANSWER: **Knox** [or specific answers, such as Henry **Knox** or Philander **Knox**]

186-13-93-09122

7. At the end of this poem, the speaker says "he prayeth best, who loveth best all things both great and small." In this poem, the title character laments "water, water, everywhere, nor any drop to drink" and sees his cohorts killed after Death wins their souls in a dice game. The title character tells his story to a wedding guest, which begins after he is cursed for shooting an albatross. For 10 points, name this Samuel Taylor Coleridge poem about the fate suffered by an old sailor.

ANSWER: "The **Rime of the Ancient Mariner**"

052-13-93-09123

8. One generalization of this statement subtracts a constant times the number of moles from the volume. That modification introduces the constants  $a$  and  $b$  and is named for van der Waals. This statement assumes that particles have negligible volume and that there are no intermolecular forces between them; for this reason, it cannot be used at high pressures or low temperatures. It states that  $P V = n R T$ . For 10 points, identify this equation of state that combines Boyle's, Charles', and Avogadro's laws.

ANSWER: **ideal gas law**

226-13-93-09124

9. In one poem, this poet declared that "you must be he I was seeking." This poet of "To a Stranger" proclaimed "the ship has weather'd every wreck, the prize we sought is won" in a eulogy for a president. In one poem, this man proclaimed that "the arms of those I love engirth me, and I engirth them." This poet of the eulogy "O Captain My Captain" included "I Sing the Body Electric" in his collection *Leaves of Grass*. For 10 points, name this American poet of "Song of Myself."

ANSWER: Walter **Whitman**

186-13-93-09125

10. In September 2013, the Senate website came under fire for questioning if this amendment protected a collective or individual right. Concerns that this amendment would be infringed upon helped stop a 2013 bill sponsored by Patrick Toomey and Joe Manchin to introduce stricter background checks. This amendment is supported by Wayne LaPierre, the executive vice president of the NRA. For 10 points, name this amendment from the Bill of Rights that protects the right to bear arms.

ANSWER: **Second** Amendment

023-13-93-09126

11. The deadliest of these events killed over a thousand people in Peshtigo, Wisconsin. Mayor Roswell Mason declared martial law, putting Philip Sheridan in charge, after this happened in Mason's city. In 1893, a reporter admitted to making up the story about Mrs. O'Leary's cow being responsible for one of these events. For 10 points, name this type of event that destroyed much of Chicago in 1871.

ANSWER: **fires**

121-13-93-09127

12. Most meteorites which fall on this extraterrestrial object are classified as shergottites. One geographical feature located on this planet is the Hellas Impact Basin, while the longest serving spacecraft orbiting it is the Odyssey. Other geographical features on this planet include Valles Marineris as well as the tallest mountain in the solar system, Olympus Mons. For 10 points, identify this planet explored by Spirit and Opportunity, the fourth planet from the sun nicknamed the "Red Planet."

ANSWER: **Mars**

126-13-93-09128

13. This religion includes a form of suffering known as dukkha. Right aspiration, right knowledge, and right speech are parts of this religion's Eightfold Path. A teacher of this religion gave a sermon that explained the Four Noble Truths after he achieved enlightenment while sitting under the Bodhi tree. This religion includes Mahayana and Theravada branches. For 10 points, name this religion that includes a Zen school and is based on the teachings of a man originally named Siddhartha Gautama.

ANSWER: **Buddhism**

023-13-93-09129

14. Johann von Spreckelsen's designed the Grande Arche for a business district in this city. The highway surrounding this city was built on the remains of the Thiers walls, the last defensive walls built here. The Grande Arche was inspired by an earlier structure here on the Champs-Élysées. Many streets were widened or straightened under the direction of Baron von Haussmann. The tallest structure here was built for the 1889 World's Fair. For 10 points, name this capital of France.

ANSWER: **Paris**

121-13-93-09130

15. Hans Richter called this composer's A-flat major symphony "the greatest symphony of modern times." Daniel Barenboim conducted his wife, Jacqueline du Pré, in a famous performance of this composer's cello concerto. He used musical cryptograms to portray his friends and family in movements like "Nimrod." His most famous composition is part of a set of six marches. For 10 points, name this English composer of the *Enigma Variations* and "Pomp and Circumstance," which is often played at graduations.

ANSWER: Sir Edward William **Elgar**

066-13-93-09131



1. It is not an integral, but voltage is equal to this operation between the electric field and the path traveled. Charge enclosed is proportional to this between the electric field and cross sectional area, and magnetic flux is also computed as this operation between field strength and cross-sectional area. Work is equal to this operation between the force and the distance displaced. It is computed by multiplying the magnitude of two vectors times the cosine of the angle between them. For 10 points, identify this vector operation that is contrasted with the cross product.

ANSWER: **dot product** [or **scalar product**; prompt on **product**]

226-13-93-09132

2. This author created a character whose friend Paul Reising shoots his wife, Zilla. In that novel by this man, the title character briefly hangs out with socialist Seneca Doane. Many of his works are set in the fictional state Winnemac, including one about a vacuous "booster" who lives in the town of Zenith. This author wrote a novel in which Carol Kennicott has trouble adjusting to the small town of Gopher Prairie. For 10 points, name this author of *Babbitt* and *Main Street*.

ANSWER: Sinclair **Lewis** [or Harry Sinclair **Lewis**]

052-13-93-09133

3. The letter beta denotes a quantity known as the capacity of these substances, which can be represented on a titration curve by the areas with the lowest slopes. Norman Good listed and names twenty examples of these substances, whose properties are calculated using the Henderson-Hasselbalch equation. They consist of a weak acid or base and their conjugate. For 10 points, name these substances, which are used to resist changes in pH.

ANSWER: **buffer** solutions

140-13-93-09134

4. The star NP0532 is found within this object. This object, observed by John Bevis in 1731, was later observed by a man who believed it to be Halley's Comet before he realized it did not move. The formation of this body was observed in 1054 by Chinese astronomers, who witnessed the supernova that created it. For 10 points, name this nebula in the constellation Taurus, the first object in the Messier catalogue.

ANSWER: **Crab** nebula [or **M1**; or **Taurus A**; or **NGC 1952**]

140-13-93-09135

5. This man ignored George Canning's request to make a mutual declaration of foreign policy, making it unilaterally instead. A faithless elector prevented this man from winning every electoral vote for president. This Secretary of State for James Madison presided after the end of the Federalist Party during the "Era of Good Feelings." For 10 points, name this man whose "doctrine" demanded an end to European intervention in the Western Hemisphere.

ANSWER: James **Monroe**

121-13-93-09136

Name the two rivers that combine into the Shatt al-Arab and surrounded the Cradle of Civilization in ancient Mesopotamia.

ANSWER: **Tigris** and **Euphrates** [either order correct, but do not accept or prompt if only one answer is given]

This is a calculation question. What is the fortieth number in the arithmetic sequence beginning 1, 5, 9, 13...?

ANSWER: **157**