



1. In November 2013, the BBC reported that this country had the right to get nukes delivered from Pakistan at will. In October 2013, this country was elected to, but turned down, a seat on the United Nations Security Council. This major backer of Syrian rebels has controversial laws prohibiting women from driving. For 10 points, name this state that produces more barrels per day than another other OPEC state.

ANSWER: Kingdom of Saudi Arabia [or KSA; or Al-Mamlakah al-'Arabiyyah as-Su'udiyah]

153-13-93-12101

2. Plato stated that this action is an undesirable release from a "guard-post," and that perpetrators of this action should have unmarked graves. A French thinker compared differing rates for this action between Catholics and Protestants, and stated that soldiers performed it more often than civilians; that thinker divided this action into egoistic, altruistic, fatalistic, and anomic types. For 10 points, identify this action central to an Emile Durkheim work, the act of taking one's own life.

ANSWER: suicide [or equivalents]

189-13-93-12102

3. Employees of this organization posed as Arab sheikhs in order to implicate six congressmen in the Abscam operation. One employee of this agency organized "dead drops" of information for Russian agents and was Robert Hanssen. While working for this organization, Melvin Purvis led the team that killed John Dillinger, a man who this organization named "Public Enemy #1." For 10 points, name this organization whose longtime director was J. Edgar Hoover.

ANSWER: Federal Bureau of Investigation [or FBI]

030-13-93-12103

4. One proof considers whether this number raised to its own power is rational, and if not, raises it to itself again to produce a number which is definitely rational. If this number could be written as a fraction, both its numerator and denominator would have to be even. The sine of 45 degrees is equal to this number's reciprocal. For 10 points, identify this irrational number equal to approximately 1.414, whose square is an even prime number.

ANSWER: the square root of 2

233-13-93-12104

5. A character in this novel has his research stunted because he cannot read German. That man has a poor cousin named Will Ladislaw. This book's female protagonist is married to the prospective author of *The Key to All Mythologies*, a foolish clergyman named Reverend Edward Casaubon. The main characters of this novel, Dr. Tertius Lydgate and Dorothea Brooke, are stuck in unhappy marriages. For 10 points, name this George Eliot novel subtitled *A Study of Provincial Life*.

ANSWER: Middlemarch: *A Study of Provincial Life*

052-13-93-12105

6. This ruler lost the duchy of Normandy after losing the Battle of Bouvines to Philip Augustus. Robert fitz Walter led one military action against this ruler. Innocent III excommunicated this ruler for opposing Stephen Langton's appointment as Archbishop of Canterbury. This brother of Richard the Lionhearted was forced to sign one document by rebelling barons at Runnymede. For 10 points, name this King of England who signed the Magna Carta.

ANSWER: King John [or John Lackland]

186-13-93-12106

7. At the beginning of this novel, the narrator refers to the handful of “stretchers” in one of the author’s previous novels. The protagonists of this novel meet two con artists who put on the play *The Royal Nonesuch* and call themselves the Duke and the Dauphin. The title character of this novel floats down the Mississippi on a raft with the escaped slave Jim. For 10 points, name this novel about a friend of Tom Sawyer written by Mark Twain.

ANSWER: *The Adventures of Huckleberry Finn*

014-13-93-12107

8. A ship found in this body of water in 2009 is thought to be the USS *Caledonia*. One sixth of this lake was affected by a record-breaking 2011 algae bloom. This lake’s South Bass Island contains the village of Put-In-Bay. Cities on this lake’s shores include Sandusky and Toledo. The Detroit and Cuyahoga rivers flow into this lake. The cities of Buffalo and Cleveland lie on this lake. For 10 points, name this fourth-largest of the Great Lakes, south of Lake Huron and west of Lake Ontario.

ANSWER: Lake Erie

131-13-93-12108

9. 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 10 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]

030-13-93-12109

10. This thinker posited that material, formal, efficient, and final causes were present in all things. He claimed that the only non-material form was the "Prime Mover." This man suggested that "eudaemonia" could be found by pursuing moderation in a manual named after his son, the *Nichomachean Ethics*. For 10 points, name this tutor of Alexander the Great and most influential philosopher of Classical Greece, who wrote the *Politics* and *Poetics*.

ANSWER: Aristotle

019-13-93-12110

11. A series of these objects used to demonstrate conservation of energy and momentum when colliding with one another is named Newton’s cradle. The small angle approximation allows for these systems to approximate simple harmonic motion at small amplitudes. The period of these objects is two pi times the square root of L over g . The double type exhibits chaotic motion, and one of these objects was used by Foucault to demonstrate the rotation of the earth. For 10 points, identify these systems consisting of a mass on a string.

ANSWER: pendulum [or pendula]

226-13-93-12111

12. In this city, Fred Shuttlesworth organized a series of confrontational demonstrations called "Project C." "Bull" Connor, this city's chief of police, became notorious for using water jets against protesters. Denise McNair, died in this city when four KKK members dynamited its 16th Street Baptist Church. An essay written in this city distinguishes between extremists for "hate" and "love." For 10 points, name this city in Alabama where Martin Luther King wrote an influential letter from jail.

ANSWER: Birmingham, Alabama

080-13-93-12112

13. This man's siblings include a doctor known as "Uncle Jack" and a woman known as "Aunt Alexandra." He employs a housekeeper named Calpurnia. This character, who is known as "One Shot," demonstrates his shooting skill by killing a rabid dog. He defends the black Tom Robinson, who has been accused of raping a white woman. This widower is the father of Jem and Scout. For 10 points, name this lawyer, the protagonist of Harper Lee's book *To Kill a Mockingbird*.

ANSWER: **Atticus** Finch [or **Finch**]

052-13-93-12113

14. In this year, two million people joined a human chain called the Baltic Way across Estonia, Latvia, and Lithuania. Also in this year, Hungary removed the defenses on its Austrian border, eventually resulting in protests whose participants overwhelmed guards, walked through Checkpoint Charlie, and chipped off souvenirs from a defunct barrier. For 10 points, name this year that included the fall of many Communist regimes and the destruction of the Berlin Wall.

ANSWER: **1989**

080-13-93-12114

15. This property was demonstrated in an experiment involving a beam of silver atoms traveling through an inhomogeneous magnetic field; that experiment was conducted by Stern and Gerlach. It takes integer values for bosons and half-integer values for fermions; for electrons, it takes values of plus and minus one-half. Two electrons in the same orbital cannot have the same value for this property because of the Pauli exclusion principle. For 10 points, identify this fourth quantum number which is either "up" or "down" for electrons.

ANSWER: **spin**

226-13-93-12115



1A. What American director produced *Spartacus* and *2001: A Space Odyssey*?

ANSWER: Stanley **Kubrick**

1B. Name the branch of the Afro-Asiatic language family which includes Ethiopian languages such as Amharic as well as Arabic and Aramaic.

ANSWER: **Semitic** languages

2A. Name the country that shares the Gobi Desert with its neighbor China.

ANSWER: **Mongolia** [or **Mongol Uls**]

2B. What former New York City public advocate defeated Joe Lhota in November 2013 to become the first Democratic mayor of New York in twenty years?

ANSWER: Bill **de Blasio**

3A. In what condition can the spine appear curved in the shape of an S or question mark rather than straight and which is commonly tested by bending forward in the school nurse's office?

ANSWER: **scoliosis**

3B. What character created by Daniel Defoe becomes a servant for Robinson Crusoe after being rescued from cannibals?

ANSWER: **Friday**

4A. What structures are thought to form from mantle plumes and create archipelagos like Hawaii?

ANSWER: **hotspots**

4B. The poet and essayist Jose Marti (mar-TEE) is a national hero of what island?

ANSWER: **Cuba**

5A. What domestic animal's color is an X-linked trait, which sometimes results in its females featuring a black-and-orange patterning known as calico?

ANSWER: domestic **cats** [or house**cats**; or **felines**; or *Felis silvestris catus*]

5B. What archeological hoax consisted of a human skull combined with the jawbone of an ape presented as a human ancestor?

ANSWER: **Pittdown Man**

6A. What civilization developed a seismograph involving dragons dropping balls in jars and also invented paper?

ANSWER: **China** [or **Chinese** civilization; accept the **Han** dynasty specifically, which is when both of those were made]

6B. What American folk singer responded to Irving Berlin's "God Bless America" with the more socially conscious "This Land is Your Land?"

ANSWER: Woody **Guthrie**

7A. This is a 20-second calculation question. If the sine squared of x is equal to .7, what is the tangent squared of x?

ANSWER: **7/3** [or **2.33**]

7B. This is a 20-second calculation question. What is the angle supplementary to a 125 degree angle?

ANSWER: **55 degrees**

8A. The Miller's Tale is the most famous example of what genre of ribald stories with a French name?

ANSWER: **fabliaux**

8B. The sulfate of what element, commonly called Epsom salt, is used as a drying agent?

ANSWER: **magnesium** [or **Mg**]

9A. Frankie Stein, Draculaura, and Clawdeen Wolf are among the characters in what Mattel fashion doll line that features the offspring of movie fiends?

ANSWER: **Monster High**

9B. What kind of proof shows the falseness of a proposition by assuming the proposition to be true and deriving a logical impossibility?

ANSWER: proof by **contradiction**

10A. This is a 30-second calculation question. A mailman has three letters to deliver to three people, but, as they are unlabeled, he delivers them randomly. What is the probability no one gets the letter intended for them?

ANSWER: **1/3**

10B. This is a 30-second calculation question. Find the point of intersection of the lines given by the equations " $2x + 5y = -1$ " and " $3x - y = 7$ ".

ANSWER: **(2, -1)**



1. A Cold War museum known as the Diefenbunker is located in this city, and this city's Tulip Day commemorates this city's harboring of the Dutch royal family in World War II. This city is linked to a nearby city by the Chaudiere and Interprovincial Bridges, and the Peace Tower is located here. This city lies at the confluence of the Gatineau, Rideau, and its namesake river and is located on the border with Quebec. For 10 points, name this city in Ontario, the capital of Canada.

ANSWER: Ottawa

030-13-93-12117

2. This object provoked a rebellion in Cornwall that Edward Seymour crushed at the Battle of Sampford Courtenay. Introduced under the Act of Uniformity, this object is the origin of the phrases "in our time" and "vile bodies." It is also the source of the phrase "till death do us part" used in wedding vows. It was introduced during Edward VI's reign under the supervision of Thomas Cranmer. For 10 points, name this religious text that contains the standard liturgy of the Anglican Communion.

ANSWER: the Book of Common Prayer

080-13-93-12118

3. A reduction in, or lack of, this substance is known as xerostomia. The polytene chromosomes of *Drosophila melanogaster* are found in this substance. This substance is secreted by the parotid gland. This substance contains an enzyme that catalyzes the decomposition of starch into maltose; that enzyme is amylase. For 10 points, identify this watery substance secreted by namesake glands and found in the mouths of many organisms.

ANSWER: saliva

066-13-93-12119

4. In the first of these films, Beethoven's 9th Symphony is used as a leitmotif for the antagonists. In a later film from this series, the villains use dump trucks to abscond with millions of dollars worth of gold bullion. Stopping hackers trying to start a "fire-sale" is the goal of Detective John McClane in a 2007 film in this series. For 10 points, name these action movies where Bruce Willis performs an action "with a vengeance" and also "lives free."

ANSWER: Die Hard

020-13-93-12120

5. Definite finite automata accept a language, or set of these things. In C, these things are null-terminated, and they are operated on by regular expressions. The most well-known example of an immutable object is an instance of the class in Java known by this name. The constitutive elements of these things can be encoded with ASCII or UTF-8. These things are joined end-to-end by concatenation. For 10 points, identify this data type often implemented as an array of characters.

ANSWER: strings

066-13-93-12121

6. The occurrence of these events is theorized to be due to photodisintegration, which causes a lack of degeneracy pressure from electrons. Heavy elements are primarily produced from these events. These events are classified as Type I or Type II, depending on whether hydrogen is present. Planetary nebulas result instead of this phenomenon for smaller stars. These events often happen after core collapse causes a large release of energy. They can leave behind neutron stars or black holes. For 10 points, name these massive stellar explosions.

ANSWER: **supernovas**

140-13-93-12122

7. One of these events saw the pioneering of techniques known as hydraulicking and coyoteing. The town of Skagway was founded due to one of these events due to its position at the foot of the White Pass Trail. One of the first major ones of these events occurred in Dahlonega, Georgia and was a reason for the passage of the Indian Removal Act. For 10 points, name these events, one of which involved prospectors known as '49ers who travelled to California after news of a strike at Sutter's Mill.

ANSWER: **gold rushes** [or reasonable equivalents]

030-13-93-12123

8. This chromosome contains the dystrophin gene, whose defects can cause Becker's and Duchenne muscular dystrophy. One of this chromosome is inactivated in the process of lyonization and then forms a Barr body. Its monosomy normally presents as a webbed neck, among other symptoms, in Turner syndrome, and extra copies of it in males results in Klinefelter's syndrome. For 10 points, identify this sex chromosome of which human females have two, unlike the Y chromosome.

ANSWER: **X** chromosome

066-13-93-12124

9. While fighting this monster, its killer had to contend with a crab sent by Hera, which later became the constellation Cancer. This creature's blood was poisonous, and its killer dipped his arrows in it to help kill such enemies as the centaur Nessus. It was killed in the second labor of Heracles, whose nephew used a firebrand to burn this monster's neck stumps. For 10 points, name this ancient Greek monster who had many heads that would regenerate if cut off.

ANSWER: Lernaean **Hydra**

052-13-93-12125

10. This author begins a play with Septimus Hodge challenging a teenager to prove Fermat's Last Theorem. That play is set at the country house Sidley Park. This man's best known play opens with the title characters betting on coin flips, with heads winning ninety-two times in a row. That play features two minor characters from *Hamlet* as the title characters. For 10 points, name this British playwright, the author of *Arcadia* and *Rosencrantz and Guildenstern Are Dead*.

ANSWER: Tom **Stoppard** [or Tomas **Straussler**]

052-13-93-12126

11. A player from this country was nicknamed the "King" while playing for Arsenal. That player's handball foul against Ireland during the qualifier stage of World Cup 2010 went unnoticed by the referees, which allowed this country to secure a spot in the World Cup. Another player from this country head-butted Marco Materazzi in the 2006 World Cup Final. For 10 points, name this home country of Thierry Henry and Zinedine Zidane.

ANSWER: **France**

227-13-93-12127

12. Edouard Lalo wrote one of these pieces in five movements for Pablo de Sarasate called the *Symphonie Espagnole*. A set of these compositions includes one that uses rapid pizzicato to depict freezing winds and another whose second movement depicts a barking dog. Those four pieces, collected in *The Contest Between Harmony and Invention*, make up Antonio Vivaldi's *Four Seasons*. For 10 points, name these pieces for a solo string instrument playing against an orchestra.

ANSWER: **violin concertos** [or **violin concerti**; prompt on **concerto**]

080-13-93-12128

13. A story about six men with this condition and an elephant was used by Buddha to illustrate men made ignorant by their own views. One man with this condition was relieved of it at Bethsaida, and another with this condition was told to wash in the pool of Siloam. That man with this condition was healed of it by blood mixed with Jesus' saliva. For 10 points, name this disability that is sometimes used to describe an unquestioning faith.

ANSWER: **blindness** [or obvious equivalents; or word forms]

030-13-93-12129

14. This country was first run by an idealist known as “Dr. Francia.” A dictator in this country who was of German descent welcomed such fugitives as Nazi experimenter Dr. Josef Mengele. It was run for much of the 20th century by dictator Alfredo Stroessner. Under Francisco Solano Lopez, this country was crushed in a war pitting it against Argentina, Brazil, and Uruguay. For 10 points, name this landlocked South American country that lost the War of the Triple Alliance.

ANSWER: **Paraguay**

052-13-93-12130

15. In such books as *Dragon's Teeth*, this author chronicled the adventures of Lanny Budd. In one of his novels, the protagonist attacks factory boss Phil Connor for raping his wife, Ona. This author created a character who eventually embraces Socialism and is a Lithuanian immigrant in Chicago named Jurgis Rudkus. That book by this man inspired the passage of the Pure Food and Drug Act due to its exposure of the meatpacking industry. For 10 points, name this author of *The Jungle*.

ANSWER: Upton Beall **Sinclair** Jr.

052-13-93-12131



1. This letter is used to represent Helmholtz free energy. The lowercase form of this letter symbolizes the unit cell length of a crystal lattice. The pre-exponential factor is denoted by this letter. A quantity symbolized with this letter equals a logarithmic ratio between light shined on a substance and the light transmitted through it. A unit for length symbolized with this letter with a circle on top is equal to ten to the minus tenths meters. For 10 points, name this letter, which represents absorbance and Angstroms.

ANSWER: A [or a]

140-13-93-12132

2. In this novel, the protagonist befriends Platon Karataev, a captured peasant who is later executed after developing a fever. The narration of this novel is often interrupted to discuss the author's deterministic theory of history. A character in this novel tries to assassinate a world leader after witnessing the Battle of Borodino. At the end of this novel, Pierre Bezukov marries Natasha Rostov. For 10 points, name this novel by Leo Tolstoy that is set during Napoleon's invasion of Russia.

ANSWER: War and Peace [or Voyna i mir]

186-13-93-12133

3. This author wrote about a character who is proclaimed dead by his family while he gambles at Monte Carlo. This author of *The Late Mattia Pascal* wrote about a character who falls off a horse and awakens thinking that he is Henry IV. In a play written by this author, the Step-Daughter works as a prostitute for Madame Pace and the Boy commits suicide with a revolver. For 10 points, name this Italian author of *Six Characters in Search of an Author*.

ANSWER: Luigi Pirandello

227-13-93-12134

4. This man assigned Nellie Bly to feign insanity and live in a mental institution for ten days. Richard Outcault created the "Yellow Kid" while working for this man before defecting to this man's rival. This owner of the *New York World* employed increasingly dirty tactics in his rivalry with William Randolph Hearst. For 10 points, name this 19th-century newspaper magnate who endowed a namesake prize for excellence in journalism.

ANSWER: Joseph Pulitzer

080-13-93-12135

5. In the membrane of this organelle, the translocon recognizes the stop-anchor sequence of a growing polypeptide. PDI catalyzes the formation of disulfide bonds in this organelle, where most chaperone proteins localize in order to promote protein folding. COPII-coated vesicles emerging from this organelle are moved to the Golgi in the second step of the secretory pathway. In eukaryotic cells, it's contiguous with the nucleus. For 10 points, name this organelle where ribosomes synthesize proteins, which comes in smooth and rough forms.

ANSWER: rough endoplasmic reticulum [or rough ER]

190-13-93-12136

What American writer offered an account of Ken Kesey and the Merry Pranksters in *The Electric Kool-Aid Acid Test* and wrote the novel *The Bonfire of the Vanities*?

ANSWER: Tom Wolfe

This is a calculation question. If f of x equals " $2x$ plus 7 " and g of y equals " y squared minus 4 ", then what is f of g of 7 ?

ANSWER: 97