

1. The first character of this name had a weakness against wood and fought villains such as Solomon Grundy and Harlequin. The most famous person to hold this title became the Spectre until his 2005 resurrection to retake this title. This role was first occupied by Alan Scott, while a later version was replaced after turning into the villain Parallax. Ryan Reynolds is slated to play this character in a 2011 film. His identities include Kyle Rayner and Hal Jordan. For 10 points, name this DC superhero who gets his color from a power ring.
ANSWER: Green Lantern

002-09-3-06101

2. At one point in this novel, Noah leaves his family to live by a river and survive on fish. Characters in this novel include the preacher Jim Casy, Connie Rivers, and Rivers' wife, Rose of Sharon. Another character in this novel dies crossing the Mojave Desert. That character's husband doesn't want to leave Oklahoma in this novel, although the rest of the central family supports the trek to California. For 10 points, name this novel about the Depression-era Joad family by John Steinbeck.
ANSWER: The Grapes of Wrath

024-09-3-06102

3. This man composed a piece that includes a musical illustration of bath water, entitled *Symphonia Domestica*. "Of the Backworldsmen" and "Of Science" are among the sections of another of this man's works. A folk hero disguises himself as a monk and is hanged in this composer's *Till Eulenspiegel's Merry Pranks*. He composed "The Dance of the Seven Veils" for the opera *Salome* (SALL-oh-may). For 10 points, name this composer of *Thus Spoke Zarathustra*.
ANSWER: Richard Strauss [prompt on Strauss]

030-09-3-06103

4. This organ's head is removed in Whipple's operation. Some people have a second duct in this organ, the duct of Santorini. The acinar cells of this organ are stimulated by cholecystokinin (co-luh-sis-toe-KIN-in). This organ is connected to the bile duct by the duct of Wirsung (VEER-sung). The delta cells of this organ produce somatostatin (so-mat-oh-STAT-in), and it also produces glucagon. For 10 points, name this organ which contains the islets of Langerhans, whose beta cells produce insulin.
ANSWER: pancreas

024-09-3-06104

5. From 1856 to the end of the Civil War, this person led the New York branch of William Lloyd Garrison's American Anti-Slavery Society. Later, she edited *The Revolution* along with Parker Pillsbury and Elizabeth Cady Stanton, and she joined with Stanton again to found NAWSA (NAW-suh). She and her three sisters tried to register to vote in the 1872 presidential election, but they were first denied, then arrested for voting. For 10 points, name this pioneer of women's rights, who was honored by having her image put on a dollar coin.
ANSWER: Susan Brownell Anthony

045-09-3-06105

6. The distance from a hydrogen atom nucleus that an electron is most likely to be found is known as this man's namesake radius. This man posited that simultaneous wave-particle duality was impossible to observe as part of the Copenhagen interpretation of quantum mechanics he created with Heisenberg (HIGH-zuhn-buhrg). This man's model of the atom modified that of Rutherford. For 10 points, name this physicist who posited that atoms consist of negatively charged electrons that follow circular orbits around a dense, positively charged nucleus.

ANSWER: Niels **Bohr**

058-09-3-06106

7. This painting partially shares its name with a work in which a couple clasps hands in front of two sailboats moored to one another. That work shows the lights of Arles (ARL) reflected in the Rhone River. A cypress tree dominates the left side of this painting. In its center, a church steeple rises above the town of Saint-Rémy (sahn RAY-mee). This painting shows swirling clouds and a crescent moon. For 10 points, name this painting that shows a nocturnal sky, a masterpiece of Vincent van Gogh.

ANSWER: *The **Starry Night*** [accept ***Starry Night over the Rhone*** before "cypress" is read]

064-09-3-06107

8. During one trip by this leader, a series of fake villages were allegedly built to give a false sense of prosperity by Grigory Potemkin (GREE-goh-ree poh-TEM-kin). This ruler's army put down a revolt of Cossacks led by Pugachev (poo-guh-CHOFF), who claimed to be this leader's dead husband, Peter III. This ruler took part in all three partitions of Poland. For 10 points, name this enlightened despot, who was born in Prussia but eventually came to rule as Empress of Russia.

ANSWER: **Catherine II** of Russia [or **Catherine the Great**; or **Yekaterina II**; or **Yekaterina Velikaya**; prompt on **Catherine**; prompt on **Yekaterina**]

023-09-3-06108

9. The service on this holiday begins with a quote from Mark, Chapter 1, verse 15, that includes the command "Repent, and believe the Gospel." The Orthodox observe the similar holiday of Clean Monday due to differences in calendars. In Western churches, it occurs forty-six days before Easter. The characteristic emblem of this first day of Lent is created by burning the leaves used on Palm Sunday. For 10 points, identify this Christian observance, in which a cross is drawn on worshippers' foreheads using the namesake substance.

ANSWER: **Ash Wednesday**

019-09-3-06109

10. One leader of this country was shot by Mehmet Ali Agca (AKH-chuh) and oversaw this country's establishment of diplomatic relations with Israel in 1993. Pietro Gasparri signed the Lateran Treaty to create this nation. Eugenio Pacelli (you-JEEN-ee-oh puh-CHEL-ee) and Karol Wojtyla (VOY-chuh-luh) were two rulers of this nation, who each adopted new names after being elected by the College of Cardinals. For 10 points, name this country that is surrounded by Italy and was once headed by Pope John Paul II.

ANSWER: State of the **Vatican** City [or the **Holy See**; or Il Stato della Citta del **Vaticano**]

027-09-3-06110

11. One type of this device stores data in circuits having two stable states known as flip-flops such that the device need not be externally refreshed, while another type uses single capacitors. Flash is a nonvolatile type of this device, which can come in dynamic or static types. If this device is insufficient for a certain task, a computer will use some hard drive space in a process known as swapping. For 10 points, name this temporary type of storage in which data can be retrieved at some constant time regardless of its relation to other data.

ANSWER: **RAM** [or **random access memory**; prompt on **memory**]

058-09-3-06111

12. In a novel written in this language, Amina is hit by a car and Fahmy is shot by the British. That novel, *Palace Walk*, is part of a trilogy in this language with *Palace of Desire* and *Sugar Street*. The story of Morgiana, who kills forty thieves for Ali Baba, was also written in this language. The tales of Sinbad are presented in this language by Scheherazade (shuh-her-uh-ZOD). For 10 points, name this language used by Naguib Mahfouz (nah-GEEB mock-FOOZ), as well as in *The Thousand and One Nights* and the Quran.
ANSWER: **Arabic** [or al-**Arabiya**]

027-09-3-06112

13. In one phase of this process, the Z-scheme provides energy to reduce adenine (ADD-uh-noon) derivatives. One type of this process requires PEP carboxylase (car-BOX-ih-lace) and physically separates its two phases; that process is called CAM. One component of this process is the reaction of RuBP catalyzed by rubisco (roo-BISS-ko); that reaction is part of the Calvin cycle. For 10 points, name this process, which occurs in and around the chloroplasts (KLOR-oh-PLASTS) in leaves, by which plants turn carbon dioxide and light into sugars.

ANSWER: **photosynthesis** [or **light**-dependent **reactions** until "two"]

022-09-3-06113

14. One incident which occurred during this event was the Taiyuan (TIE-won) Massacre, in which Christian missionaries were killed. This event was quelled by the Eight-Nation Alliance and secretly encouraged by the Dowager Empress. Its instigators believed themselves invulnerable to bullets and referred to itself as the Society of Righteous and Harmonious Fists. For 10 points, name this uprising which lasted from 1899 to 1901 during the Qing (CHING) Dynasty and attempted to expel foreigners from China.

ANSWER: **Boxer** Rebellion [or anything reasonable mentioning the **Boxers**]

024-09-3-06114

15. Wendy Wright and Henry Jackson were among the leaders of groups opposing this activity in Washington, D.C. in 2009. This activity became legal in New Hampshire as of January 2010, but was rejected by voters on Election Day 2009 in Maine. A 2009 bill authorizing this in New York failed to pass the legislature, meaning that Iowa, Connecticut, Vermont, and Massachusetts were the only four states where it was recognized as of last year. For 10 points, identify this status, which was revoked in 2008 by California's Proposition 8.

ANSWER: **same-sex marriage** [or **gay marriage** or other obviously equivalent answers; prompt on **marriage** during the first sentence only]

019-09-3-06115

1A. The western U.S.'s Ogallala formation is an example of what massive underground sources of water?

ANSWER: **aquifers**

1B. What Scottish chemist made an accidental discovery in an old petri dish that saved the lives of millions when he found the antibacterial agent penicillin?

ANSWER: Alexander **Fleming**

2A. In Spanish, what verb mood usually expresses doubt, uncertainty, or denial in a dependent clause?

ANSWER: **subjunctive** mood

2B. Identify the triptych (TRIP-tick), housed at the Prado (PRAH-doe), that shows paradise on the left and Hell on the right, and was painted by Hieronymous Bosch (here-AH-nuh-mus BOSH).

ANSWER: *The **Garden of Earthly Delights***

3A. The novels *Philosopher or Dog?* by Joaquim Machado de Assis (joe-a-KEEM MAH-shah JA-sees) and *Blindness* by Jose Saramago are some of the literary classics originally written in what language?

ANSWER: **Portuguese** [or **Português**]

3B. Two examples of this device from the *Odyssey* are "swift-footed" Achilles and "ox-eyed" Hera. Give the term in literature for a word that accompanies someone's name or takes its place.

ANSWER: **epithet**

4A. This is a 10-second calculation question. If one and a quarter cup of sugar is needed to make a batch of two dozen cookies, how many cookies can be made with 15 cups of sugar?

ANSWER: **288** [or **24 dozen** or **12 batches**]

4B. This is a 10-second calculation question. Add four and five-ninths to five and two-sevenths.

ANSWER: **620/63** [or **nine and fifty-three sixty-thirds**]

5A. Samuel Richardson's works *Pamela* and *Clarissa* are classic examples of what kind of novel, which is told through letters between the characters?

ANSWER: **epistolary** novel

5B. This team was nicknamed the "bad boys" of the NBA in the 80s. Name this team, whose current roster includes Jason Maxiell, Rodney Stuckey, and Rip Hamilton.

ANSWER: **Detroit** Pistons [or Detroit **Pistons**]

6A. This is a 20-second calculation question. Evaluate $(-7x + 8y)/(3x - 9y)$ when $x = -9$ and $y = -2$.

ANSWER: **-47/9** [or **negative five and two-ninths**]

6B. This is a 20-second calculation question. Factor $x^2 - 20x + 91$.

ANSWER: **(x-7)(x-13)** [order of the factors does not matter]

7A. What phenomenon, which produces a bluish glow in nuclear reactors, occurs when beta particles travel faster than the speed of light of a specific medium?

ANSWER: **Cherenkov radiation** [or **Cerenkov radiation**]

7B. Identify the country whose salt flats of Salar de Uyuni (sah-LAR day oo-YOO-nee) contain huge amounts of lithium, which its president, Evo Morales, refuses to let western companies mine.

ANSWER: Plurinational State of **Bolivia** [or Estado Plurinacional de **Bolivia**]

8A. This district of London is located toward the city's East End and is the site of the Royal Opera House. Tourists may enjoy an abundance of licensed street performers in what area, made famous in *Pygmalion* as the spot where Henry Higgins discovers Eliza Dolittle selling flowers?

ANSWER: **Covent Garden**

8B. Name the biological cycle that breaks down acetyl CoA (uh-SEE-till co-"A") into carbon dioxide and water, which are then passed to the electron transport chain.

ANSWER: **Krebs** cycle [or **tricarboxylic acid** cycle; or **citric acid** cycle]

9A. This is a 30-second calculation question. Find the area of a trapezoid with a height of 12 inches, a top base of 11 inches, and a bottom base of 18 inches.

ANSWER: **174 square inches**

9B. This is a 30-second calculation question. Find the mean of the six numbers 59, 88, 69, 78, 5, and 91.

ANSWER: **65**

10A. The games *Alpha Centauri* and *Call to Power* are spinoffs of what series of turn-based strategy games from designer Sid Meier?

ANSWER: **Civilization**

10B. What anti-Keynesian economist explained his ideas in *Capitalism and Freedom* and advocated policies such as supplying school vouchers and abolishing the draft?

ANSWER: Milton **Friedman**

1. One of this author's protagonists is sheltered by a family that brings guns to church to continue their feud with the Shepherdsons. That protagonist's inability to thread a needle ruins the ruse that he was a girl named Sarah Williams. This author of several works set on the Mississippi River wrote about a title character's escape from Widow Douglas and Miss Watson with the slave Jim. For 10 points, name this author of *Huckleberry Finn* and *Tom Sawyer*.

ANSWER: Mark **Twain** [or Samuel Langhorne **Clemens**]

022-09-3-06117

2. One set of these objects is orthogonal with respect to a Gaussian weighting function, and another is used to solve Laplace's (luh-PLAH-sez) equation in spherical coordinates; those sets of these objects are named for Hermite (er-MEET) and Legendre (luh-ZHAN-druh). Writing a Taylor series attempts to approximate a differentiable function as one of these objects. One of these is guaranteed to have a number of roots equal to its degree by the fundamental theorem of algebra. For 10 points, name these functions of a variable and its powers, such as $x^2 + 2x + 1$.

ANSWER: **polynomials**

022-09-3-06118

3. In one play by this author, Hugo Barine kills Hoederer (HOY-dur-er), but is unaware that the Party wants to create a martyr. This author of *Dirty Hands* wrote about the sweetish sickness that afflicts Antoine Roquentin in his novel *Nausea*. His play about the interactions of Ines, Garcin, and Estelle inspired the saying "Hell is other people." For 10 points, name this author of *No Exit* and other French existentialist works.

ANSWER: Jean-Paul Charles Aymard **Sartre**

020-09-3-06119

4. This country's city of Spanish Lookout is home to its only commercially viable oilfields. The tallest peak in this nation is named after Arthur Conan Doyle. Its borders are partially defined by the Sarstoon and Hondo rivers. This country's capital used to be a coastal city named for the country, but the devastating 1961 Hurricane Hattie forced a new planned capital to be built inland. For 10 points, name this country, that was once called British Honduras, a Caribbean scuba-diving haven with capital at Belmopan.

ANSWER: **Belize**

026-09-3-06120

5. Rudyard Kipling wrote a response to this poem in which he bemoaned that "the thirty million English sent twenty pounds and four!" The action of this poem is completed while "all the world wonder'd." The speaker reveals "someone had blunder'd," but the title group rides "into the valley of death" after deciding "their's not to reason why, their's just to do and die." For 10 points, name this Alfred, Lord Tennyson poem about a group of six hundred British soldiers who ride into Russian cannon fire.

ANSWER: "The **Charge of the Light Brigade**"

015-09-3-06121

6. One work by this composer includes the aria "Sanctus fortis" and a chorus of souls singing Psalm 90 in its two parts. This composer adapted a Cardinal Newman poem into *The Dream of Gerontius* and included "Dorabella" and "Nimrod" as part of a greater work. He described several friends in his *Enigma Variations* and compiled a set of six military marches including the tune "Land of Hope and Glory." For 10 points, name this English composer whose first *Pomp and Circumstance* march is commonly played at graduations.

ANSWER: Sir Edward William **Elgar**

020-09-3-06122

7. This quantity can be somewhat overcome in biological systems by hydrogen tunneling. When this quantity rather than product stability determines which product is formed, the reaction is said to be under kinetic control. The Arrhenius (ar-REN-ee-us) equation relates it to temperature and reaction rate. This is the amount of energy between the reactants and the transition state. For 10 points, identify this energy barrier that must be overcome for a reaction to take place.

ANSWER: **activation energy** [or **free energy of activation**]

001-09-3-06123

8. Followers of this politician often use the tactic of "entryism." This man founded the Fourth International, which opposed the concept of "socialism in one country." This Russian negotiator at the Treaty of Brest-Litovsk was the leader of the Red Army during the Russian Civil War. He was ultimately assassinated by Ramón Mercader with an ice-axe. For 10 points, name this Communist who, after losing a power struggle with Stalin in 1928, was expelled from the Party and forced to flee to Mexico.

ANSWER: Leon **Trotsky** [or Lev Davidovich **Bronstein**]

045-09-3-06124

9. One title character created by this author is the captain of the *Ghost*. Ernest Everhart fights the Oligarchy in his work *The Iron Heel*. Another of his title characters fights with Lip-Lip. The main character of a different work by this author defeats Spitz in a brawl and wins a thousand dollars for John Thornton. For 10 points, name this American author of the short story "To Build A Fire" and the novels *The Sea-Wolf*, *White Fang*, and *The Call of the Wild*.

ANSWER: Jack **London** [or John Griffith **Chaney**]

062-09-3-06125

10. Lonsdaleite is a hexagonal type of this mineral associated with meteor impacts. Individual units of this mineral are classified based on the amount of nitrogen and boron in the lattice. This mineral is most commonly found in lamproite and kimberlite. It consists of sp³ carbon bonded in a tetrahedral network. When sold commercially, it is rated in terms of its color, clarity, cut, and carat. It rates a ten on the Mohs scale. For 10 points, name this valuable gem that is the hardest known mineral.

ANSWER: **diamond**

001-09-3-06126

11. Critical assistance at this battle came from an alliance with the Choctaw under Pushmataha. This battle was fought on the grounds of Chalmette Plantation and also involved naval aid from pirate Jean Lafitte. Edward Packenham's British troops were defeated here, though neither commander was aware that the Treaty of Ghent had ended the war two weeks before this battle was fought. For 10 points, what final Battle of the War of 1812 was a victory for Andrew Jackson on the Gulf of Mexico?

ANSWER: Battle of **New Orleans**

002-09-3-06127

12. While traveling as an ordinary peasant with Hermes, this god was so impressed with their hospitality that he turned Baucis and Philemon into trees and spared them from a flood. The Korymbantes (CORE-ee-ban-tees) banged their swords and shields to cover this god's cries when he was cared for by the goat Amalthea (ah-MAL-thay-uh) as an infant. This god's mother Rhea substituted a stone for him at birth so his father Cronus wouldn't eat him. For 10 points, name this father of Athena and Ares and wife of the jealous Hera.

ANSWER: **Zeus** [or **Jupiter**; or **Jove**]

015-09-3-06128

13. This leader cited an earthquake and Church influence as reasons for the failure of his initial efforts in the Cartagena (CAR-tuh-HAY-nuh) Manifesto. This winning commander at Carabobo (CAH-ruh-BO-bo) issued a decree threatening death to those not following him. After the Battle of Boyacá (boy-uh-CAH), this leader sent Sucre (SUE-cray) and San Martín (sahn mar-TEEN) to fight in Ecuador and Peru. For 10 points, name this president of Venezuela, Bolivia, and Gran Colombia who was the "liberator" of five South American nations.

ANSWER: Simón José Antonio de la Santísima Trinidad **Bolívar** Palacios y Blanco

020-09-3-06129

14. One character in this novel is obsessed with a shoe that belonged to her adopted daughter Agnes as a baby. In this book, Clopin is a king of the vagabonds who tries to hang the poet Pierre Gringoire (grin-WAR). Another character has a pet goat named Djali (JAH-lee). In this novel, Phoebus is a captain of the King's Archers who is stabbed by the villain Archdeacon Frollo. For 10 points, name this Victor Hugo novel in which the gypsy Esmeralda is loved by the deformed bell ringer Quasimodo.

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

015-09-3-06130

15. This man acted as an arbitrator in the aftermath of the War of the Triple Alliance, giving a disputed area to Paraguay. This President signed a bill allowing women to practice law at the Supreme Court. His attempt to defend the gold standard was thwarted when Congress overrode his veto of the Bland-Allison Act. This man was derided by opponents as "His Fraudulency," because his election was secured by discarding certain votes from Oregon and Florida. For 10 points, name this President who defeated Samuel Tilden in the tainted 1876 election.

ANSWER: Rutherford Birchard **Hayes**

024-09-3-06131

1. John Donne's "The Sun Rising," in which the sun is personified as a "busy old fool," uses this poetic device. John Keats's "Ode on a Grecian Urn" uses this device when the speaker addresses the images on the side of the ancient vessel. Another example of this device occurs in *Julius Caesar* when Mark Antony talks to the title character's corpse. For 10 points, what literary term describes this rhetorical device, in which something inanimate or absent is spoken to as though it could respond?

ANSWER: **apostrophe**

045-09-3-06132

2. The phonological loop was introduced as part of the "working" model for this faculty. One form of it is improved by "chunking." That form of this faculty is related to George Miller's idea that it is governed by the number seven plus or minus two. The assassination of John F. Kennedy is commonly cited as eliciting the "flashbulb" form of this faculty. For 10 points, name this faculty that is commonly divided into long-term and short-term varieties and is lost by sufferers of amnesia.

ANSWER: **memory** [or short-term **memory**]

020-09-3-06133

3. The relative abundance of one of these elements to potassium gives a rock sample's time since recrystallization. One of these elements is the net product of the C-N-O cycle in stars. The hexafluoride (HEX-uh-FLOOR-ide) of one of these elements was the first compound formed using one of them; they are typically inert. For 10 points, name these elements with full electron shells, a group that includes argon and helium.

ANSWER: **noble gases** [or **inert gases** until "inert"; or **Group VIIIA**; or **Group 18**]

022-09-3-06134

4. A misquoted passage from Tertullian is the basis for the saying that this term describes the belief in Christ. Albert Camus defines and examines it in his essay *The Myth of Sisyphus*, in which he claims that even though this word describes life, everyone need not commit suicide. This word also completes the name of a type of logical refutation in which the argument is "reduced" to it. For 10 points, name this word that also names a type of ridiculous theater associated with Eugene Ionesco.

ANSWER: **absurdity** [accept **absurdism**; **absurdo**; **absurdum** or any reasonable word form]

045-09-3-06135

5. At the border of the alpine version of this biome, stilted trees called krummholz (KRUM-holes) are found. This environment is prone to solifluction (sol-ih-FLUCK-shun). A version of this biome is found on the Colorado Plateau. Lichens (LYE-kens) and reindeer mosses are found in this biome; those plants are fed upon by caribou in the Arctic version of this biome. This biome contains frozen soil known as permafrost. For 10 points, name this cold "treeless plain" biome found in places like Alaska.

ANSWER: **tundra**

001-09-3-06136