



1. In one story, this figure is rude to Perseus, and Perseus uses the head of Medusa to turn this figure into a mountain. In another story, this father of Calypso and the Pleiades (PLEE-ah-dees) agrees to help a hero who is working for King Eurystheus (YOO-ris-the-us). However, after this figure gets the Golden Apples from the Hesperides (Hess-"PEAR"-ah-dees), he is tricked by that hero, Hercules, into returning to his job. For 10 points, name this mythological titan who was punished by Zeus to hold the heavens on his shoulders.

ANSWER: **Atlas** [or **Atlas** Telamon]

023-12-36-05101

2. Camille Saint-Saens was offended by this work's use of a high bassoon solo in its opening measures. This work is divided into two parts, "Adoration of the Earth" and "The Sacrifice." This ballet expanded on the musical innovations of its composer's previous work *Petrushka*, and its radical use of polytonality and polyrhythm sparked a riot at its 1913 premiere in Paris. For 10 points, name this ballet depicting a pagan ritual, a work of Igor Stravinsky.

ANSWER: *The **Rite of Spring*** [or *Le **sacre du printemps***]

014-12-36-05102

3. A successful instance of this action occurred after the Tenure of Office Act was violated by Edwin Stanton's removal as Secretary of War. A report by Kenneth Starr describing a relationship with Monica Lewinsky led to another case of this action being achieved. This action is started by the House, and, if successful there, is followed by a Senate trial. For 10 points, Andrew Johnson and Bill Clinton are the only Presidents targeted by what action that can lead to the removal of the president.

ANSWER: **impeachment** [or **impeaching** the president; or **impeachment** of Andrew Johnson before "Starr"]

123-12-36-05103

4. The longest river in this country has tributaries including the Finlay and Peace rivers and is a site of natural gas extraction at a delta near Mallik. Its Burgess Shale oil reserve is found partially in its Yoho national park. Great Bear and Great Slave lakes lie in this country. Its highest peak, found in the St. Elias range, is Mount Logan. This country's namesake "shield" surrounds Hudson Bay. For 10 points, name this country whose cities include Edmonton, Calgary, and Montreal.

ANSWER: **Canada**

040-12-36-05104

5. One work by this author sees the Matterhorn Peak in California climbed by Japhy Ryder and the narrator Ray Smith. In addition to *The Dharma Bums*, this author wrote a novel in which Old Bull Lee and the poet Carlo Marx join the Neal Cassady-inspired Dean Moriarty and the narrator Sal Paradise on a cross-country journey of drug usage. For 10 points, identify this friend of Allen Ginsberg and novelist of the Beat Generation who wrote *On the Road*.

ANSWER: Jack **Kerouac**

138-12-36-05105

6. This island, which is inhabited by the Dayak people, has its highest point in the Crocker Range at Mount Kinabalu. This island is separated by the Makassar Strait from Sulawesi to the east, and by the Sulu Sea from the Philippines to the northeast. This island's largest city, Kuching, is the capital of Sarawak, while it also contains the national capital Bandar Seri Begawan. For 10 points, name this large Pacific island shared by Indonesia, Malaysia, and Brunei.

ANSWER: **Borneo**

132-12-36-05106

7. One opera by a composer from this country features the seduction of the title character's niece by Anatol and includes the aria "Must the Winter Come So Soon?" A modern composer from this country wrote the opera *Einstein on the Beach*. Catfish Row is the setting of another opera written in this country; that opera features the song "Summertime" and is called *Porgy and Bess*. For 10 points, name this home country of Samuel Barber, Philip Glass, and George Gershwin.

ANSWER: The **United States** of America [or the **USA**; prompt on **America**]

141-12-36-05107

8. A jury in this film decides that one character is "guilty of being innocent of being" the protagonist. Another character cuts off his own leg after the ropes on his ship came to life and tried to seize him, under the control of the villainous, Ian McShane-portrayed Blackbeard. In this movie, Penelope Cruz plays Angelica, who accompanies the protagonist on a voyage to the fountain of youth. For 10 points, name this most recent movie starring Johnny Depp as Captain Jack Sparrow.

ANSWER: **Pirates of the Caribbean: On Stranger Tides** [or **Pirates of the Caribbean 4**; do not accept or prompt on "Pirates of the Caribbean"]

080-12-36-05108

9. The total effect of a vector field on a given curve is calculated by the "line" variety of this operation. A series of parabolic curves is used to approximate this operation with Simpson's Rule, and this operation can also be approximated using the trapezoid rule or less accurate Riemann sums. This operation's definite form is used to calculate the area under a curve. For 10 points, name this calculus operation which is contrasted with differentiation and uses anti-derivatives.

ANSWER: **integration** [or **integral**]

014-12-36-05109

10. One character in this work is taken up to heaven by a chariot after being burned alive. The protagonist of this work is able to use leaves from the Tree of Life to heal his wounds acquired in battle with the devil Apollyon. Locations such as the town of Vanity Fair, the tempting Valley of Ease, and the final River of Death are passed in the course of the journey undertaken by Christian in this work. For 10 points, name this allegorical narrative by John Bunyan.

ANSWER: *The **Pilgrim's Progress***

014-12-36-05110

11. This war saw the use of Congreve rockets in the Battle of Bladensburg. The bloodiest battle of this war was Lundy's Lane. Matthew Perry won the Battle of Lake Erie during this war. Jean Lafitte helped one side in this war win the Battle of New Orleans, which occurred after the signing of the Treaty of Ghent that ended this war. For 10 points, name this final war between America and Great Britain that started almost thirty years after the end of the Revolutionary War.

ANSWER: War of **1812**

141-12-36-05111

12. The Ukrainian language employs one of these named after a saint, who helped develop another of these constructs called Glagolitic. They contrast with abjads because they include vowels, and the Latin one is used by all Romance languages. One of these systems, named Cyrillic, is used in Russian. They are named after the first two letters in Greek. For 10 points, name these systems of writing, which in English begin with A, B, and C.

ANSWER: **alphabets** [or **writing systems** until the word "abjads" is read]

027-12-36-05112

13. One character in this novel dies swallowing a Nazi Party pin given him by the protagonist and is contrasted with a character with whom the protagonist steals jewelry named Jan Bronski. The protagonist of this novel has a voice that can shatter glass, and he decides to stop growing on his third birthday, when he is given the title instrument. For 10 points, name this first novel of the *Danzig Trilogy* about Oskar Matzerath, a work of Günter Grass.

ANSWER: *The **Tin Drum*** [or *Die **Blechtrommel***]

014-12-36-05113

14. The title character of one of this man's paintings dips a quill in an inkwell as the infant Jesus puts his hand on a pomegranate. This painter of *Madonna of the Magnificat* created a scene in which Zephyrus abducts Chloris while a woman throws flower petals on the ground. Another of his works shows a woman holding a red robe up towards the central goddess, who rides to shore on a shell. For 10 points, name this painter of *Primavera* and *The Birth of Venus*.

ANSWER: Sandro **Botticelli**

127-12-36-05114

15. In one of this author's novels, the general manager of the River Company of the Caribbean has an affair with fourteen-year-old America Vicuña, who reminds him of Dr. Urbino's wife Fermina Daza. In another novel, this author described an incestuously begotten child born with a pig's tail and a rain of yellow flowers following the death of Jose Arcadio Buendia (bwen-DEE-uh). For 10 points, name this Colombian magical realist who wrote *Love in the Time of Cholera* and *One Hundred Years of Solitude*.

ANSWER: Gabriel **Garcia Marquez** [do not prompt on "Marquez"]

014-12-36-05115



1A. This is a 10-second calculation question. Find both roots of the equation  $x^2 - 7x + 12$ .

ANSWER:  $x = 3$  and  $x = 4$  [must include both, either order is acceptable]

1B. This is a 10-second calculation question. Find the range of the following set: {3, 4, 2, 8, -2, 3}

ANSWER: **10**

2A. One character with this name received power from the Starheart, and a more famous one received his power from a dying Abin Sur. Give this shared name most famously held by test pilot Hal Jordan.

ANSWER: **Green Lantern**

2B. Give the name for the loose network that provided shelter for American slaves trying to escape to Canada during the early 1800s.

ANSWER: **Underground Railroad**

3A. In which Gioachino [jo-a-KEE-no] Rossini opera does Gessler order the title character to shoot an apple off his son's head?

ANSWER: **William Tell** [or **Guillaume Tell**]

3B. Name the short story by Herman Melville in which the title copyist repeatedly speaks the line "I would prefer not to."

ANSWER: **"Bartleby the Scrivener"**

4A. This is a 20-second calculation question. If a baseball player steals bases at an 80% success rate and has been caught stealing 8 times, how many stolen bases does he have?

ANSWER: **32**

4B. This is a 20-second calculation question. What is the sine of the fourth-quadrant angle whose cosine is 4/5?

ANSWER: **-3/5** [or **-0.6**; do not accept any positive number]

5A. Several German and Austrian families in Brazil and Paraguay shielded what SS doctor infamous for his human experimentation in Nazi concentration camps?

ANSWER: Josef Rudolf **Mengele** [or **Angel of Death**; or **Todesengel**]

5B. Name the "Wizard of Menlo Park" whose laboratory developed the incandescent light bulb and the Kinetoscope (key-NET-oh-scope).

ANSWER: Thomas Alva **Edison**

6A. What second most abundant element in the universe takes its name from the sun and is the second element on the periodic table?

ANSWER: **helium**

6B. Which French artist lived with Vincent van Gogh for a time before moving to Tahiti in 1891 and painting such works as *Where Do We Come From? What Are We? Where Are We Going?*

ANSWER: Paul **Gauguin** [or Eugene Henri Paul **Gauguin**]

7A. What is the name given to the angle at which total internal reflection occurs?

ANSWER: **critical** angle

7B. What geologic structure is formed from an accumulation of glacial debris and has rogen and lateral types?

ANSWER: **moraine**

8A. This is a 30-second calculation question. Find the area of a rectangle with perimeter 100 units and a length three times that of the width.

ANSWER: **400** square units

8B. This is a 30-second calculation question. Find the vertex of the parabola drawn out by the equation  $y = x^2 - 4x + 3$ .

ANSWER: **(2,-1)** [or **x = 2** and **y = -1**]

9A. Identify the quantity which is graphed against unemployment by the Phillips Curve and has "cost-push" and "demand-pull" varieties.

ANSWER: **inflation**

9B. Altinak and Mintaka are two of the stars in an asterism in this constellation. Name this constellation whose "belt" can be used as a navigational aide and which is named for a mythological hunter.

ANSWER: **Orion**

10A. Name the second book of the Bible in which Moses leads the Israelites out of Egypt.

ANSWER: Book of **Exodus** [or **Shemot**]

10B. Which stage of mitosis sees the separation of chromosomes in a dividing cell?

ANSWER: **anaphase**



1. Up to an 18 fold increase in the risk of acute-myeloid leukemia has been observed in patients with this disease, who may also experience Alzheimer's disease-like dementia in their 40s and 50s. Jerome Lejeune identified the root cause of this disease, which may be observed via amniocentesis or karyotyping. Mental retardation is observed in all suffers of this disease. For 10 points, name this disease associated with trisomy of chromosome 21.

ANSWER: **Down's syndrome** [accept **trisomy 21** prior to mention of "trisomy"]

020-12-36-05117

2. This man's foreign minister was the comte de Vergennes (CONT de ver-GAIN), who began his country's involvement in the American Revolution. This man's trouble with his country's economy and finance ministers such as Turgot (TUR-goh), Calonne (cal-OWN), and Necker (nek-KAIR) forced this man to summon the Estates General for the first time in 175 years. For 10 points, name this king of France who, along with his wife Marie Antoinette, became a victim of the guillotine during the French Revolution.

ANSWER: **Louis XVI** of France [prompt on **Louis**]

121-12-36-05118

3. This author wrote about a man who injures himself while hanging curtains and seeks comfort from his servant Gerasim in *The Death of Ivan Ilyich*. In one novel by this man, the lover of Count Vronsky commits suicide by jumping in front of a train, and another novel ends with the marriage of Natasha and Pierre following Napoleon's invasion of Russia. For 10 points, name this Russian novelist of *Anna Karenina* and *War and Peace*.

ANSWER: Leo **Tolstoy** [or Lev Nikolayevich **Tolstoy**]

141-12-36-05119

4. This leader employed Nicolas Sarkozy as one of his lawyers, and he falsely claimed to have been only minimally involved in the Propaganda 2 Masonic lodge. This man has been repeatedly attacked in a publication this man refers to as "The Ecommunist." In 2010 a Moroccan belly dancer claimed this man hosted "Bunga-Bunga" parties. For 10 points, name this scandal-prone Italian Prime Minister.

ANSWER: Silvio **Berlusconi**

002-12-36-05120

5. This author created a middle-aged couple who encounter a pair of lizards named Leslie and Sarah at the beach in his play *Seascape*. This author also created a character who plays the game "Humiliate the Host" and tries to seduce the biology professor Nick, who is visiting with his wife Honey. That character, Martha, is sung the title question of the play she appears in by her husband George. For 10 points, name this American playwright of *Who's Afraid of Virginia Woolf?*

ANSWER: Edward Franklin **Albee**

014-12-36-05121

6. The Havasupai people live along this river. Its headwaters are west of La Poudre Pass and flow into Lake Granby. The Gunnison and Gila rivers feed this river. Its path includes Lake Powell, formed by this steadily-shrinking river's Glen Canyon Dam. This river powers the Hoover Dam, but no longer reaches the Gulf of California. For 10 points, name this river that runs through the Grand Canyon and shares its name with a rectangular state.

ANSWER: **Colorado** River [accept **Grand Canyon** until "river" is read]

104-12-36-05122

7. One native of this place became the first king of Alba Longa. Another native of this city killed Turnus and married his fiancée, Lavinia. That figure was the legendary founder of Rome, according to Virgil. Neoptolemus (nee-op-TOL-uh-mus) murdered the last of its kings. This home of Aeneas (un-NEE-us) and Priam was destroyed in a war that began when its prince Paris kidnapped Agamemnon's sister-in-law, Helen. For 10 points, name this city that the Greeks entered by hiding in a giant wooden horse.

ANSWER: **Troy** [or **Ilium**; or **Ilion**]

121-12-36-05123

8. The GFR measures the function of this organ. In the distal tubules of this organ, sodium ion absorption is stimulated by aldosterone. Semipermeable twisted masses of tiny tubes form glomeruli in this organ, which transfer filtrate to Bowman's capsule. The glomeruli act as the main filters for this organ's functional unit, the nephron, which is responsible for reabsorbing water. For 10 points, name this organ that produces urine.

ANSWER: **kidneys**

130-12-36-05124

9. The time domain is replaced by this quantity's domain in periodic functions that go through a Fourier (FOR-ee-air) transform. This quantity decreases due to redshift because of the Doppler effect. When objects are excited at their natural value of this quantity, a buildup of large vibration amplitude known as resonance occurs. This quantity equals a wave's phase velocity divided by its wavelength. For 10 points, name this quantity measured in hertz.

ANSWER: **frequency**

130-12-36-05125

10. In addition to lists, these data structures that use pointers can be recursively defined. The simplest versions are binary, but in the event that an ordered list is turned into one a heap works better. The height of them is the maximum number of nodes that must be traversed to get to the farthest data from the root. Pruning and grafting algorithms respectively remove and add sections to them. For 10 points, what data structure organizes information into roots, nodes and leaves?

ANSWER: **trees**

147-12-36-05126

11. The speaker of this poem notes "Nor, in thy marble vault, shall sound my echoing song" after earlier discussing how his "vegetable love should grow vaster than empires." The introduction of the image of "Time's winged chariot hurrying near" initiates the argument which concludes "though we cannot make our sun stand still, yet we will make him run." For 10 points, name this poem which begins "Had we but world enough, and time," typifying the *carpe diem* motif, by Andrew Marvell.

ANSWER: "**To His Coy Mistress**"

014-12-36-05127

12. This man was assisted by a group that included Theodore Parker and George Luther Stearns called the Secret Six. This man led a group searching for Dutch Henry that ended up killing five men in retaliation for the sack of Lawrence. That action was the Pottawatomie Massacre. Another action by this man was stopped by a group of marines led by Robert E. Lee. For 10 points, name this abolitionist who was hanged after he attempted to start a large slave revolt by seizing the arsenal at Harpers Ferry.

ANSWER: John **Brown**

140-12-36-05128

13. In one novel by this author, the title character escapes from being imprisoned for a fraudulent debt and is taken in by a glove-maker. Robert Lovelace rapes that member of the Harlowe family. Lady Davers's brother Mr. B--- hides in the closet of another character created by this author, Miss Andrews, whose story exemplifies "Virtue Rewarded." For 10 points, name this eighteenth-century English author of the epistolary novels *Clarissa* and *Pamela*.

ANSWER: Samuel **Richardson**

014-12-36-05129

14. Cities sacked by this ruler include Urgench and Samarkand, the capital of the Khwarezmian (kwa-REZ-me-an) Empire. Born with the name Temujin, this man's early opponents included the Naimans. He was succeeded by his son Ogedei (OH-guh-die) as the ruler of an empire that eventually split into sections including the Golden Horde and the Il-khanate. This man's grandson established the Yuan Dynasty in China. For 10 points, name this grandfather of Kublai Khan, who founded the Mongol Empire.

ANSWER: **Genghis** Khan [or **Genghis** **Khan**; or **Temujin** until it is read; prompt on **Khan**]

132-12-36-05130

15. In one of this author's short stories, an arrogant white woman dies of a stroke after being struck with a purse for offering a black boy a penny. This author of "Everything That Rises Must Converge" also wrote a story in which a conversation with the owner of the diner The Tower, Red Sammy, foreshadows the murder of the grandmother's family by The Misfit. For 10 points, name this female southern author of "A Good Man Is Hard to Find."

ANSWER: Flannery **O'Connor**

014-12-36-05131



1. John II of this state was a leaders of the Second Crusade who helped this state recover territory. This empire was ruled for almost two hundred years by the Palaeologus (PALE-ee-oh-LOW-gus) family, who removed rulers put in place after this empire's capital was taken in the Fourth Crusade. This empire collapsed in 1453 when its capital fell to siege by the Ottomans. For 10 points, identify this empire descended from the Eastern Roman Empire, with capital at Constantinople.

ANSWER: **Byzantine** Empire [or **Byzantium**; or **Eastern Roman** Empire before it is read]

133-12-36-05132

2. Pearson's HSAB theory describes the hard form of these entities as having small size and high electronegativity. The reaction of one of these entities with an ester in saponification is critical in soap making. One theory of these entities defines them as electron pair donors, while another defines them as proton acceptors. Those are the Lewis and Bronsted-Lowry theories of these entities. For 10 points, name these entities often contrasted with acids.

ANSWER: **bases**

123-12-36-05133

3. This basketball player was the first collegiate underclassman to be taken with the first overall pick in the draft, and he is still the only rookie to win the NBA Finals MVP award. Those achievements came after this man led Michigan State to victory in the 1979 NCAA Tournament against an Indiana State team led by Larry Bird, his later rival on the Celtics to this man's Lakers teams. For 10 points, name this guard who retired from basketball in 1991 when he announced he was HIV-positive.

ANSWER: Magic **Johnson** [or Earvin **Johnson, Jr.**]

023-12-36-05134

4. In the Jones type of this, an alcohol is converted to carboxylic acid or ketone. Permanganate and dichromate are reagents that catalyze these processes. Electrons appear on the right side of the half-reaction for this type of process, which causes rusting. For 10 points, name this process referring to the loss of electrons, contrasted with reduction.

ANSWER: **oxidation**

127-12-36-05135

5. This man won his current office by defeating Walter Huddleston. This politician has voiced opposition to the McCain-Feingold campaign financing reforms and introduced the Protect America Act, which allows government surveillance of suspected terrorists without needing a warrant. This man assumed his highest office after Bill Frist chose not to seek re-election. For 10 points, name this Senate Minority Leader, a Republican from Kentucky.

ANSWER: Addison Mitchell "Mitch" **McConnell, Jr.**

137-12-36-05136