1. This battle was preceded by the Battle of the Borgne (BORN), which pitted Thomas Catesby Jones against Alexander Cochrane. John Lambert took command of the losing side of this battle after the death of General Edward Pakenham. Pirates led by Jean Lafitte (luh-FEET) aided this battle's winners. Andrew Jackson rose to prominence after this battle, which occurred after the signing of the Treaty of Ghent. For 10 points, name this War of 1812 battle fought near a Louisiana port city on the Mississippi.
ANSWER: Battle of **New Orleans**

079-12-54-02101

2. One member of this family goes into hiding after killing a man at the Hooper Ranch. Another member of this family is abandoned by her teenage husband Connie Rivers, and breastfeeds a starving man at the end of the novel they appear in. Its members include the teenager Al, the children Ruthie and Winfield, and Rose of Sharon. After another member of this family, Tom, returns from jail, they travel with Jim Casy to California. For 10 points, name this Oklahoma family from John Steinbeck's novel *The Grapes of Wrath.*
ANSWER: **Joad** family

004-12-54-02102

3. In 1961, this city was where Kennedy assistant John Seigenthaler (SEE-gen-thall-er) was hit with a pipe at a Greyhound bus station. A movement in this city started by E.D. Nixon sought someone "above reproach" to test city ordinances. Besides being the site of an attack on "Freedom Riders," this city was home to the Dexter Avenue Baptist Church, from which Martin Luther King organized a 1955 boycott. For 10 points, name this Alabama city in which Rosa Parks refused to surrender her bus seat to a white person.
ANSWER: **Montgomery**

052-12-54-02103

4. In a story by this author, Mama gives her daughter Maggie the hand-stitched quilts demanded by her other daughter, the arrogant and educated Dee. This author of "Everyday Use" wrote a novel about an abused wife who enters into a sexual relationship with her female companion Shug Avery. That novel consists of letters to God from a girl raped and impregnated by her father Alphonso. For 10 points, name this African-American author who created Celie in *The Color Purple.*
ANSWER: Alice [Malsenior] **Walker**

080-12-54-02104

5. Torque can cause this quantity to change in a phenomenon called precession (pre-SESH-un). This quantity also results in the rapid spin of a neutron star as it shrinks. The increase of a skater's speed as he pulls in his arms is a consequence of the conservation of this quantity, as is the second of Kepler's laws of planetary motion. For 10 points, name this quantity equal to the product of moment of inertia and angular velocity, the rotational analogue of the quantity equal to mass times velocity.
ANSWER: **angular momentum** [prompt on **momentum**; do not accept "linear momentum"]

064-12-54-02105

6. This man served as the first U.S. civilian governor of the Philippines. With his Secretary of State Philander Knox, this President implemented Dollar Diplomacy. This man's presidency saw the Ballinger-Pinchot (pin-CHO) affair and the introduction of the income tax. His re-election bid coincided with Theodore Roosevelt's run with the Bull Moose Party in 1912. For 10 points, name this President who served as a Supreme Court Justice and lost an election to Woodrow Wilson.
ANSWER: William Howard **Taft**

7. In this novel, a hermit who thinks he is an archangel ties up and threatens to murder the first title character, who is rescued by his new companion, the disinherited noble Miles Hendon. The second title character reveals the location of the Great Seal, which he had been using as a nutcracker. In this novel, Edward must escape from the wicked John Canty to take his place on the throne after the death of Henry VIII. For 10 points, name this Mark Twain novel about a poor boy and a future king who temporarily trade places.
ANSWER: *The **Prince and the Pauper***

8. In a plant cell, this quantity is referred to as turgidity. The Morse equation is used to calculate a form of this quantity equal to the van't Hoff factor times molarity times R times temperature. Dalton's law describes how one can sum up individual terms for this quantity. In thermodynamics (thur-moe-die-NAM-iks), work equals this quantity times the change in volume. According to Boyle's law, this quantity is inversely proportional to volume. For 10 points, name this quantity often measured in Pascals.
ANSWER: **pressure** [or osmotic **pressure**]

9. A group called CODOFIL is dedicated to preserving this language in the United States. Madawaska (mah-duh-WAS-kuh) and Van Buren are U.S. cities where over seventy percent of the population speaks this language. Both of those communities are in Maine. It is predominantly spoken in one country's "Walloon Region" and is found in the U.S. in such dialects as "Acadian" and "Cajun." For 10 points, name this official language of Gabon, Cote d'Ivoire (COT div-WAR), and the Canadian province of Quebec.
ANSWER: **French** [or **Francais**]

10. The enzyme gyrase (JY-rase) is used to relieve strain in the beginning of this process. In the cell cycle, this process occurs in the S phase between the two G phases. Nitrogen-15 was used in the Meselson-Stahl experiment, which showed that this process was semi-conservative. Okazaki (oh-kah-ZAKH-kee) fragments, which are connected by ligase (LIE-gase), are formed on the lagging strand during this. Helicase (HEE-lih-case) unwinds a certain structure at the beginning of this process. For 10 points, name this process in which a certain double stranded structure is duplicated.
ANSWER: **DNA replication** [or equivalent answers]

11. This lake contains two state parks, with one located on its largest island, Antelope Island. A railroad that cuts this lake in half from east to west is called the Lucin (loose-in) Cutoff. This lake receives its water from the Jordan, Bear, and Weber (WEE-bur) Rivers. This lake is the largest remnant of the prehistoric Lake Bonneville. A nearby capital city was named for this lake when that city was created in 1847 by Brigham Young. For 10 points, name this saline lake that is located in northern Utah.
ANSWER: **Great Salt** Lake [prompt "Salt Lake"]

12. This organ contains a mass of capillaries called the glomerulus (glah-meh-ROO-luhs) that is surrounded by Bowman's capsule. It regulates blood pressure by releasing renin into the bloodstream, and it releases waste like ammonium into urine via the ureter. Painful buildups of calcium and uric acid can deposit in this organ, forming its namesake "stones". It is composed of around one million nephrons. For 10 points, name this organ whose function is simulated by dialysis, which is responsible for filtering the blood.
ANSWER: **kidney**

13. This author's *The Filocolo* (fee-LO-coh-lo) inspired a story by Chaucer. Biographies of Eve and Cleopatra are amongst the one hundred six accounts presented in his *On Famous Women.* This writer laid the foundation for the Troilus and Cressida story in *Il Filostrato*. In his most famous work, Dioneo (dye-oh-NAY-oh) is given special privileges due to his wit. In that work, seven women and three men flee from the Black Death in Florence and tell one hundred stories. For 10 points, name this Italian author of the *Decameron.*
ANSWER: Giovanni **Boccaccio**

14. Climbing fibers send information to Purkinje (purr-KIN-jay) cells in this region. Due to this region's supervisory rather than initiating role, damage to it tends to not cause paralysis. Unlike the larger structure it resembles, its folds are symmetrical. Located behind the pons of the brainstem and located beneath the cerebral cortex, this structure is evolutionarily older than the cortex. For 10 points, name the structure that regulates and coordinates posture, balance and movement, known as the "little brain."
ANSWER: **cerebellum**

15. After crying at the singing of Demodocus, this character tells of a man whose blood was drunk by Antiphates (ann-TIFF-uh-teez). During that tale at the court of Alcinous (al-kin-OH-us), he also recounts how his men disobeyed him by opening a bag of winds belonging to Aeolus (ay-UHL-us). This man, who was tied to the mast in order to listen to the Sirens, also sailed between Scylla and Charybdis (kuh-RIB-diss) before returning to Ithaca (ITH-uh-kuh). For 10 points, name this husband of Penelope, the title character of the Homeric epic following the *Iliad.*
ANSWER: **Odysseus** [or **Ulysses**; or **Ulixes**]

1A. In 2011, a woman known as Gulnaz attracted attention for being arrested after she was raped in what country, whose politics are largely controlled by the Pashtun ethnic group?
ANSWER: Islamic Republic of **Afghanistan**

1B. In Hinduism, moksha (MOKE-shuh) is liberation from the cycle of what concept, in which the soul enters a new body after death?
ANSWER: **reincarnation** [or **samsara**]

2A. This is a 10-second calculation question. What is the maximum of a set that has mean 8, median 7, minimum 3, and range 11?
ANSWER: **14**

2B. This is a 10-second calculation question. What is the arcsine of negative one? Remember to express your answer in radians.
ANSWER: **-pi/2** [or **negative pi over 2**]

3A. What rocky bodies are smaller than planets and orbit the Sun in a belt between Mars and Jupiter?
ANSWER: **asteroid**s

3B. Name the Neil Diamond song which contains the lyric "Good times never seemed so good."
ANSWER: "**Sweet Caroline**"

4A. This is a 20-second calculation question. Find the point of intersection of the lines given by the equations 2x + 5y = 20 and 6x - 7y = 16.
ANSWER: **(5,2)** [or **x=5**, **y=2**]

4B. This is a 20-second calculation question. If September 1 is a Sunday, what is the probability that a randomly selected day in September is not on a weekend? Express your answer as a fraction in lowest terms.
ANSWER: **7/10**

5A. Who painted a man with a green apple hovering in front of his face in *The Son of Man* and a pipe above the phrase "ceci n'est pas une pipe" (seh-see nay PAH oon PEEP) in *The Treachery of Images*?
ANSWER: Rene François Ghislain **Magritte** (muh-GREET)

5B. Name the American politician who twice lost the presidential race to Eisenhower and who dramatically showed photographs proving the presence of Soviet missiles in Cuba at the U.N. Security Council in 1962.
ANSWER: Adlai Ewing **Stevenson** II

6A. A preliminary hearing was held in December 2011 for Bradley Manning, who was charged on twenty-two counts of releasing classified information to what anti-secrecy website?
ANSWER: **Wikileaks**.org

6B. What name is given to the art movement that uses images or objects from mass culture, such as Roy Lichtenstein's comic book paintings or Andy Warhol's Campbell Soup can?
ANSWER: **Pop** art

7A. This is a 30-second calculation question. What is the determinant of the 3x3 matrix whose first row is [1 0 2], second row is [3 1 3], and third row is [3 -1 2]?
ANSWER: **-7**

7B. This is a 30-second calculation question. Find the area of a regular octagon with side length 2 inches. Express your answer in simplest radical form.
ANSWER: **8 + 8** times the square **root** of **2** inches [or **8 + 8 rad**ical **2** inches; or **8 plus 8 square roots of 2**]

8A. What Russian composer's works include *Night on Bald Mountain* and *Pictures at an Exhibition*?
ANSWER: Modest **Mussorgsky** (muh-ZORG-skee)

8B. What is the name of a program that, like an interpreter, converts code written in a programming language into machine code?
ANSWER: **compiler**

9A. Archimedes's analysis of density allowed him to prove that what object was not purely made of gold?
ANSWER: votive **crown**

9B. What Massachusetts statesman defends a farmer from the devil in a short story by Stephen Vincent Benet (buh-NAY)?
ANSWER: Daniel **Webster**

10A. Alfred Wegener described what motion of large landmasses that is built on by the theory of plate tectonics?
ANSWER: **continental drift**

10B. What physicist is the namesake of a principle that no two fermions can have identical quantum states at the same time?
ANSWER: Wolfgang Ernst **Pauli**

1. This equation calculates the power of a concentration cell. One term in it is typically written as .059 divided by the number of electrons. It involves a coefficient of the ideal gas constant times absolute temperature divided by Faraday's constant times moles of electrons. It shows that when the reaction quotient is one, the potential equals the standard potential. For 10 points, name this equation of electrochemistry that gives the reduction potential of a half-cell.
ANSWER: **Nernst** equation

127-12-54-02117

2. This man's marriage to Isabella caused the Lusignans (loos-in-YANS) to revolt. Stephen Langton opposed this man, who himself led the opposition to William Longchamp. When Arthur was declared heir to the throne, this man returned to England while his brother was on a crusade. This ally of Phillip II of France was the youngest son of Henry II and Eleanor of Aquitaine and a brother of Richard the Lionhearted. For 10 points, name this king who was forced by his barons at Runnymede to sign the Magna Carta.
ANSWER: **John** Lackland [or **Jean** Sans Terre]

124-12-54-02118

3. The compound acetylide (ah-SEE-tih-lide) is a diatomic form of this element with a negative charge. In stars, this element is formed by a series of nuclear fusion reactions called the triple alpha process. The Calvin cycle uses the enzyme RuBisCO (roo-BIHS-koh) as a means of fixating this element. It forms the entirety of fullerenes along with related compounds like buckyballs and nanotubes. For 10 points, name this element whose allotropes include graphite and diamond, the study of which forms the basis of organic chemistry.
ANSWER: **carbon**

064-12-54-02119

4. One cause of this expedition was the Treaty of Nonsuch, which gave the Dutch revolt a foreign ally. Medals struck after this expedition bore the Latin phrase "Flavit Jehovah et Dissipati Sunt," referring to the so-called "Protestant wind" that aided the defenders. This force was beaten at Gravelines (GRAHV-ul-EEN) by Baron Effingham after being harassed in port by Francis Drake. For 10 points, name this fleet commanded by the Duke of Medina-Sidonia, which failed in its 1588 mission to conquer England for Spain.
ANSWER: Spanish **Armada** [or the Invincible **Armada**; or la **Armada** Española; or la **Armada** Invencible]

019-12-54-02120

5. Wilson's theorem states that this function of p-minus-1 is congruent to negative 1 modulo p. Stirling's formula is used to approximate this function, and the gamma function extends it to non-natural numbers. Taylor series include terms with this function of each number in the denominator. Computing *n* choose *k* involves three applications of this function. For 10 points, name this function that multiplies all the natural numbers less than or equal to the input, which is usually denoted by an exclamation point.
ANSWER: **factorial**

127-12-54-02121

6. After meeting with this man, Margaret Thatcher remarked "We can do business together." He was temporarily ousted by an incompetent "Emergency Committee" in the August Coup. This man followed through on his "New Thinking" foreign policy by signing the INF Treaty with the United States. This man allowed greater freedom of speech and instituted democratic reforms with his dual policies of *glasnost* and *perestroika* (pair-es-TROY-kuh). For 10 points, name this final leader of the Soviet Union.
ANSWER: Mikhail Sergeyevich **Gorbachev**

7. In one work by this man, a nurse refuses to sing of a man who comes to shore once in every seven years to search for a faithful wife. In another of his works, a cobbler's hammering interrupts the serenading Beckmesser as he attempts to woo Eva. In addition to *The Flying Dutchman* and *The Mastersingers of Nuremberg,* this man also wrote an opera cycle based on Germanic myth that includes *The Rhine Gold* and *The Valkyrie.* For 10 points, name this composer of *The Ring of the Nibelung.*
ANSWER: Richard **Wagner**

8. One of this film's characters leaves her job as *Vogue*'s plus-size fashion editor. According to this film, "Life's a happy song when there's someone by your side to sing along." After the cancellation of the TV show *Punch Teacher,* this movie's main characters produce a variety show telethon hosted by Jack Black. In this film, the schemes of oilman Tex Richman are opposed by the orange-skinned Walter. For 10 points, name this 2011 film starring Jason Segel and Kermit the Frog.
ANSWER: The **Muppets** [do not accept or prompt "The Muppet Movie"]

9. A national park and bird sanctuary in this country is named "the Coorong (COO-wrong)." Native animals in this country include a perch named for the Macquarie River and a cod named for this country's longest river, the Murray. A landmark located here is also called "Uluru (oo-LOO-roo)" by the natives and is a sandstone rock formation in the Northern Territory. Ayers Rock is located in this country, whose states include Victoria and Queensland. For 10 points, name this country whose eastern coast contains the Great Barrier Reef.
ANSWER: Commonwealth of **Australia**

10. This character is left by his fiancée Belle and is devastated by the death of his sister Fan. He fondly remembers working for Mr. Fezziwig, who put on festive parties. This character is startled when he sees the face of his deceased business partner Jacob Marley in his doorknob. He comes to regret his poor treatment of Bob Cratchit after visits from the Ghosts of Christmas past, present, and future. For 10 points, name this protagonist of *A Christmas Carol* by Charles Dickens.
ANSWER: **Ebenezer** Scrooge [or Ebenezer **Scrooge**]

11. This man revised his theory of government and binding in *The Minimalist Program.* Morris Halle and this man discussed the rule of trisyllabic shortening in *The Sound Pattern of English.* In his book *Syntactic Structures,* he discussed the grammatical but meaningless sentence "Colorless green ideas sleep furiously." For 10 points, the theory of generative grammar was originated by what MIT linguist, also noted for his political activism?
ANSWER: Avram Noam **Chomsky**

12. This city was originally founded as Lutetia and contains a large business district called La Defense. Baron Haussmann (HOUSE-man) redesigned much of this city in the mid 1800s, including its sewer system that dates back to the 1300s. This city's sights include the Orsay art museum, built on the site of a former train station, and another large art museum which is home to a glass pyramid designed by I.M. Pei. For 10 points, name this European city whose attractions include the Champs-Elysees (shomp zel-ee-SAY), the Louvre (LOOV), and the Eiffel Tower.
ANSWER: **Paris**

13. This author wrote about Orsino's failure to deliver Beatrice's letter to the Pope in his play *The Cenci* (CHEN-chee). In one poem he described the "wrinkled lip, and sneer of cold command" of the title figure. This author of "Hymn to Intellectual Beauty" wrote the line "Ye are many - they are few" in "The Masque of Anarchy." He related the story of a "traveller from an antique land" in a poem about a ruined statue. For 10 points, name this Romantic poet of "Ode to the West Wind" and "Ozymandias" (ah-zee-MAN-dee-us).
ANSWER: Percy Bysshe **Shelley**

14. Besides Johnny McCarthy and Magic Johnson, this man is the only NBA player to have earned a triple-double in his playoff debut. This man's team defeated the Washington Wizards in that playoff series before losing to the Detroit Pistons, and he later lost to the Spurs in his first Finals appearance. In 2008, he became the youngest player to score ten thousand points, with a dunk over Kevin Garnett. For 10 points, name this forward who controversially left the Cleveland Cavaliers for the Miami Heat.
ANSWER: Lebron **James**

15. This character's brother William is strangled in some woods, a crime for which Justine Moritz is executed. This character is himself falsely accused of the murder of his friend Henry Clerval. He marries his cousin Elizabeth Lavenza, who is killed on their wedding night. This character tells his story to the ship captain Robert Walton, relating how he reanimated a being formed from old body parts. For 10 points, name this scientist who creates a monster in a Mary Shelley novel.
ANSWER: Victor **Frankenstein** [or **Victor** Frankenstein]

1. In one of this author's novels, the title character contemplates her forbidden homosexual love for Sally Seton. In that novel, World War I veteran Septimus Smith commits suicide and the title character Clarissa hosts a party. This author also created the painter Lily Briscoe, who grieves for the matriarch of the central family whose death is recounted in the section "Time Passes." For 10 points, name this British novelist of *Mrs. Dalloway* who wrote about the Ramsay family in *To the Lighthouse.*
ANSWER: Adeline Virginia **Woolf**

014-12-54-02132

2. A son of Rind was born for the purpose of avenging this figure, who lived in Breidablik (BRAID-uh-blick) and was the father of Forseti. This figure's funeral pyre was lit aboard his ship Ringhorn after his wife Nanna died of grief. Vali avenged the death of this god by killing his blind brother Hodur (HOE-dur), but the mastermind of the plot to kill this god was punished by being bound to a rock below a snake dripping venom. For 10 points, name this Norse god of light who, by Loki's trickery, was killed with mistletoe.
ANSWER: **Balder** [or **Baldr** or **Baldur**]

142-12-54-02133

3. This writer called himself "famous among foxes and pheasants" in a poem concluding, "Time held me green and dying, though I sang in my chains like the sea." This poet of "Fern Hill" asked "curse, bless me now with your fierce tears" in a poem addressed to his dying father. In that villanelle, this poet tells his father to "rage, rage against the dying of the light." For 10 points, name this Welsh poet who wrote "Do Not Go Gentle into That Good Night."
ANSWER: Dylan Marlais **Thomas**

080-12-54-02134

4. This hero served Omphale (ohm-FA-lay) as penitence for killing Iphitos in a fit of rage, and he served King Eurystheus (yoo-RIS-thee-us) as penitence for killing Megara. Philoctetes (fil-OCK-tee-tees) recovered this man's bow. His wife killed him by giving him a cloak poisoned with the blood of the centaur Nessus. This husband of Deianira (die-uh-NEER-uh) teamed up with Iolaus (ee-OH-los) to kill the Hydra. He also cleaned the Augean (AW-jee-an) Stables and slew the Nemean (NEE-mee-an) Lion. For 10 points, name this hero who completed twelve labors.
ANSWER: **Heracles** [or **Hercules**]

079-12-54-02135

5. During a fight for control of this country, the first use of *kamikaze* pilots occurred at the Battle of Leyte (LAY-tuh) Gulf. Edward King surrendered in this country with his 72,000 soldiers, who were forced to endure a bloody march to Camp O'Donnell from Bataan. This country was conquered after the Battle of Corregidor (co-reh-hee-DOOR). Before departing this country, Douglas Macarthur proclaimed, "I shall return." For 10 points, name this formerly American-held island nation conquered by Japan in World War II.
ANSWER: Republic of the **Philippines** [or Republika ng **Pilipinas**]

080-12-54-02136

This is a calculation question. Expand "quantity x plus 3 all cubed" in simplest form.
ANSWER: **x cubed plus 9 x squared plus 27 x plus 27**

080-12-54-02137

What French naturalist names an obsolete evolutionary theory of acquired characteristics, which stated that giraffes stretching their necks to reach leaves in trees will have children with long necks?
ANSWER: Jean-Baptiste **Lamarck**