1. This artist proposed an S-shaped "line of beauty," which can be seen in his self-portrait, The Painter and his Pug. He depicted the fates of two apprentices, one lazy and the other hardworking, in a series of engravings titled Industry and Idleness. Another of his series includes such works as The Tête à Tête (TET ah TET) and warns against the dangers of money. This British satirist of Marriage à-la-mode is better known for another series of paintings chronicling Tom's descent into Bedlam. For 10 points, name this artist of A Rake's Progress.
ANSWER: William Hogarth
080-10-24-07101
2. In a Memorial Day address, this man stated that "through our great good fortune, in our youth our hearts were touched with fire;" that statement referred to his Civil War service. He wrote that, "the Fourteenth Amendment does not enact Mr. Herbert Spencer's Social Statics" in his dissent in the case of Lochner v. New York. This author of The Common Law also wrote the majority opinion in the case of Schenck v. United States. For 10 points, name this American Supreme Court justice who created the "clear and present danger" test for limiting free speech.
ANSWER: Oliver Wendell Holmes, Jr.
030-10-24-07102
3. This man appointed a Secretary of Energy to replace Georgina Kessel, in an effort to boost his country's economy. Before assuming his current office, he himself had served as Secretary of Energy under his predecessor before winning a highly contested election in 2006 against Roberto Madrazo (mah-DRAH-zoe) and Andrés Obrador (ahn-DRAYS OH-brah-DORE). This man has been heavily criticized for his failure to end the war between his country and several violent drug cartels. For 10 points, name this current President of Mexico.
ANSWER: Felipe de Jesús Calderón (cahl-day-ROAN) Hinojosa
083-10-24-07103
4. Dvorak's (duh-VOHR-shack's) concerto for this instrument quotes his song "Cypresses" and was inspired by the death of Josefina Cermakova (chair-muh-KOH-vuh). Other virtuosi (ver-tyoo-OH-see) of this instrument include Pablo Casals (kuh-SAHLS) and Mstislav (MIST-ih-slav) Rostropovich (ROSS-tro-POH-vitch). Jacqueline du Pre (doo PRAY) performed Edward Elgar's Concerto for this instrument in B Minor. Johann Sebastian Bach wrote six suites for this unaccompanied instrument. For 10 points, name this instrument notably played by Yo-Yo Ma.
ANSWER: violoncello
5. Alternating light and dark bands found at the base of these geological formations are known as ogives (OH-jives). These formations erode the surrounding terrain through processes known as plucking and abrasion. Such erosion can lead to the development of indentations known as cirques (SEERKS), which often have small lakes referred to as tarns. They form crevasses on their surface. For 10 points, name these large flows of ice.
ANSWER: glaciers
6. In this process, "cracking" occurs when when similar demographic groups are divided. Some states require the preservation of "communities of interest" during this process. In this process, "bleaching" occurs when lines are drawn creating majority-minority blocks. Gerrymandering occurs during this process when lines are drawn to benefit specific political parties. For 10 points, name this process that occurs following the census in which states draw the lines for the areas to be represented by congressmen. ANSWER: redistricting [or reasonable equivalents such as drawing congressional districts; or Gerrymandering before it is read]
7. This man wrote that the title entities "stand in Time's eye almost as long as flowers" in his poem "Cities and Thrones and Powers." He wrote a poem to raise funds for the families of soldiers in which the title "Absent-Minded Beggar" asks for a donation "When you've finished killing Kruger with your mouth." This man also wrote "East is East and West is West, and never the twain shall meet" in "The Ballad of East and West." 10 points, name this British author of the poems "Gunga Din" and "If," as well as The Jungle Book. ANSWER: Rudyard Kipling

030-10-24-07107
8. Henry Gladwin made a defense of a key outpost during this conflict, which included the Devil's Hole Massacre and the Battle of Bloody Run. During this conflict, Pennsylvania Governor John Penn ordered the arrest of men involved in the Paxton Boys massacre. It was in this conflict that Jeffery Amherst distributed smallpox-infected blankets to Indians at Fort Pitt. For 10 points, name this 1763 to 1764 Indian uprising in the Great Lakes region, led by the namesake Ottowa chief.
ANSWER: Pontiac's Rebellion [or reasonable equivalents mentioning Pontiac such as Pontiac's uprising]
9. In electrostatics, this quantity is defined as the work necessary to move one charge an infinite distance away from a nearby charge. In mechanics, one type of this quantity is equal to one half times a spring constant times the square of the distance from equilibrium. Another type of this quantity is the "gravitational" type, and is equal to the mass times the acceleration due to gravity times the height at which an object is located. For 10 points, name this type of energy which is stored in a system due to its configuration or position.
ANSWER: potential energy [or potential after "energy" is read]
10. The protagonist of this book becomes President of the Lions Club and is killed by Paul Lazzaro (lah-ZAH-roh) during a speech he gives in Chicago. Other characters in this book include the narrator's friend Bernard V. O'Hare and Eliot Rosewater, who introduces the protagonist to the books of Kilgore Trout. The Tralfamadorians (trahl-FAH-mah-DOR-ee-uhns) kidnap this novel's protagonist, an optometrist who is "unstuck in time" and named Billy Pilgrim. It is partially based on the author's experiences during the fire-bombing of Dresden. For 10 points, name this novel by Kurt Vonnegut.
ANSWER: Slaughterhouse-Five, or The Children's Crusade: A Duty-Dance with Death
083-10-24-07110
11. This sports team plays their home games at an arena named after the boxer nicknamed the "Brown Bomber," Joe Louis. As of January 11, 2011, currently injured members of this team include Dan Cleary and the goalie Chris Osgood, who has won over 400 games. Former players for it include Gordie Howe and longtime captain Steve Yzerman ("EYE-zer-man), while current players include Nicklas Lidström (LEED-strum) and Pavel Datsyuk (DAHT-shook). Fans of this team are known for throwing octopi onto the ice at home playoff games. For 10 points, name this NHL team from Detroit.
ANSWER: Detroit Red Wings [or Detroit Red Wings before "Detroit" is read]
12. The ping pong mechanism is one method sometimes used to describe these molecules. RNA can act as one of these molecules when it assumes the hammerhead configuration. They often possess complimentary geometric shapes according to the lock and key model. They can be described using a Lineweaver-Burke (LINE-"weaver" BURK) plot, which depicts Michaelis-Menten (mih-KAY-liss MEN-ten) kinetics. These molecules act upon a substrate which binds to a certain active site. For 10 points, name these proteins that catalyze biological reactions.
ANSWER: enzymes
064-10-24-07112
13. The second season of this show culminated with the liberation of Ba Sing Se (BAH SING SEH). The predecessor of the title character of this show was Roku ( $\mathrm{ROH}-\mathrm{koo}$ ), a friend of the great-grandfather of Princess Azula (ah-ZOO-lah), who is captured near the end of this three-season show. The title character of this show must learn to master four elements and stop Fire Lord Ozai (OH-zye). For 10 points, identify this Nickolodeon cartoon whose first season was adapted into a disastrous 2010 M. Night Shyamalan movie. ANSWER: $\underline{\text { Avatar: }}$ The Last Airbender [or Avatar: The Legend of Aang; prompt on The Last Airbender; prompt on The Legend of Aang]

020-10-24-07113
14. One short story by this author tells of how the Devil helped Pahom (pah-HOME) acquire lots of real estate, while another story tells of Trukhashevsky's (TROO-kah-SHEV-skee's) affair with Pozdnishef's ("PAUSED"-nee-shev's) wife. Those stories are "How Much Land Does a Man Need?" and "The Kreutzer (KROYT-zer) Sonata." This author recounted the last days of a dying judge in The Death of Ivan Ilyich (ILL-ee-itch). For 10 points, name this author of Anna Karenina (kah-REN-inn-uh) and War and Peace. ANSWER: Leo Nikolayevich Tolstoy

001-10-24-07114
15. Larry Layton was the only person prosecuted for this event. The man responsible for this event had previously been appointed by Mayor George Moscone as Chairman of the San Francisco Housing Authority. Leo Ryan became the only member of Congress to die in the line of duty when he was murdered prior to this event. The people who died in this event were members of the People's Temple. For 10 points, name this 1978 event in Guyana in which 913 cult members drank cyanide-laced Flavor-Aid in a mass suicide.
ANSWER: Jonestown massacre [or reasonable equivalents mentioning,Jonestown]

1A. What is the infinitive form of the irregular French verb whose first-person indicative forms are "je dors" (DOR), "tu dor" (DOR), and "il dort" (DOR)?
ANSWER: dormir (door-MEER)
1B. In November 2010, what city outlawed the distribution of toys in meals which do not meet certain nutritional standards, effectively banning McDonald's Happy Meals?
ANSWER: San Francisco
2A. Which author of A Letter Concerning Toleration set out his views on the tabula rasa (TAH-byoo-lah RAH-zah), an ethical clean state that mankind starts with, in his Essay Concerning Human Understanding? ANSWER: John Locke

2B. What metrical foot consists of a long syllable followed by two short ones?
ANSWER: dactyl (DACK-till)
3 A . This is a 10 -second calculation question. For a given number x , what is secant squared x minus 1 ? Express your answer in terms of other trigonometric functions.
ANSWER: tangent squared x [or the square of the tangent of x ]
3B. This is a 10 -second calculation question. What is the mean of the set $\{2,9,4,2,8\}$ ?
ANSWER: $\underline{\mathbf{5}}$
4A. Lake Okeechobee (OH-kee-CHO-bee) and the Okefenokee (OH-kee-feh-NOH-kee) Swamp are both located in which U.S. state whose panhandle is home to such cities as Panama Beach and Pensacola? ANSWER: Florida

4B. What part of a CPU contains a small amount of memory that stores recently accessed pieces of main memory?
ANSWER: data cache (CASH) [or instruction cache]
5 A . This is a 20 -second calculation question. What is the difference between the volume of a sphere with radius 4 and the volume of a cylinder with radius and height 4? Express your answer in terms of pi.
ANSWER: 64/3 pi (sixty-four thirds pi) [or twenty-one and one-third pi]
5B. This is a 20 -second calculation question. What is the remainder when quantity $x^{2}+8 x+1$ end quantity is divided by quantity $\mathrm{x}+1$ end quantity?
ANSWER: - $\mathbf{6}$
6A. Name the sculptor who depicted Erasmo da Narmi on horseback in the Gattamelata
(GAH-tah-mah-LAH-tah) statue and revived the freestanding nude sculpture with his bronze David. ANSWER: Donatello di Betto Bardi

6B. Which U.S. President, once a governor of New Jersey, gave the Fourteen Points speech and saw the Federal Reserve Act passed during his time in office?
ANSWER: Thomas Woodrow Wilson
7A. This is a 30 -second calculation question. What is the product of cube root of quantity $8 x^{3}+12 x^{2}+6$ $x+1$ end quantity by the quantity $8 x-5$ end quantity?
ANSWER: $16 \mathrm{x}^{2}-2 \mathrm{x}-5$
7B. This is a 30 -second calculation question. Three fair, six-sided dice are rolled. What is the probability that the sum of the numbers showing on the three dice is 13 ?
ANSWER: 7/72 [or 21/216]

8A. It is at the center of the porphyrin (POR-fer-in) ring in chlorophyll. Name this element which burns in a very bright white light.
ANSWER: magnesium [or Mg]
8B. For a quadratic equation in general form, what term is defined as $b$ squared minus four $a c$, and indicates, by its sign, the number and nature of the quadratic's roots?
ANSWER: the discriminant
9A. What group of fifteen elements, whose heaviest member is lawrencium (lohr-EN-see-um), is a series of radioactive heavy metals including eleven artificial trans-uranium elements?
ANSWER: actinides series [or actinoids series]
9B. The expulsion of magnetic fields by objects with this property is known as the Meissner effect. Identify this state that occurs at very cold temperatures, in which metals lose their electrical resistance. ANSWER: superconductivity [or superconductors]

10A. What theorist of the German politial system connected Calvinist ideas about work to the development of modern economies in his book The Protestant Ethic and the Spirit of Capitalism?
ANSWER: Max Weber (VEB-er)
10B. His violin-playing sister eventually turns on him and removes the furniture from his room before his father pelts him with apples. Name this Franz Kafka protagonist who is transformed into a large insect. ANSWER: Gregor Samsa [or Gregor Samsa]

1. During this holiday, food is eaten off of a straw mat called a mkeka (um-KAY-kah). Gifts called zawadi (zah-WAH-dee) are given out on this holiday. Those celebrating this festival use a candle-holder with seven spaces, representing the Seven Principles. Inspired by the tradition of the "first fruit" celebration, Dr. Maulana Karenga (maw-LAH-nah kah-REHN-guh) instituted this holiday in 1966. For 10 points, name this holiday, which lasts from December 26 to January 1st and celebrates the African harvest.
ANSWER: Kwanzaa
080-10-24-07117
2. An underwater facility beneath a prison in this city is referred to as "The Raft." The Avengers formerly used Stark Tower in this city as a headquarters, and Wilson Fisk runs the underworld in this city. The Richards family purchased the upper five floors of the Baxter Paper Company Building in this city. In 2009, this city elected as its new mayor former newspaper magnate J. Jonah Jameson. For 10 points, name this city in which Peter Parker sold pictures of himself as Spider-Man to the Daily Bugle newspaper. ANSWER: New York City
3. This man wrote a story in which four campers believe a hermit who invites them to a game of cards is an Aztec priest. In addition to writing "Four Men in a Cave," this man wrote a story in which the easterner claims that he "refused to stand up and be a man" after witnessing Scully's son cheat the Swede in a game of cards. That story is "The Blue Hotel." For 10 points, name this author of a story about the Cook, the Correspondent, and the Oiler, "The Open Boat," as well as The Red Badge of Courage. ANSWER: Stephen Crane

030-10-24-07119
4. The "Australian" mountain range with this name is a section of the Great Dividing Range, and the "Southern" mountain range with this name is in New Zealand. The Jura (JOOR-uh) Mountains are a section of the major range with this name. The Brenner Pass, which is near Innsbruck, runs through this mountain range, which includes the peaks of Jungfrau (YOONG-FROW) and Mont Blanc. The Matterhorn is another peak in this mountain range, which is the site of Lake Geneva. For 10 points, name this European mountain range that runs through Austria, Italy, France, and Switzerland.
ANSWER: Alps
027-10-24-07120
5. In this novel, Count Mippipopolous (MIP-pee-POP-oh-lohs) espouses the philosophy of getting your money's worth and knowing when you have. The prostitute Georgette Leblanc tries to hide her rotting teeth in this novel, and the hotel owner Montoya provides support for those who show promise as "the real thing" in this novel. The wounded World War I veteran Jake Barnes is the protagonist of this work in which the matador Romero slays a bull in Pamplona. For 10 points, name this book about members of the Lost Generation living in Spain in the 1920s, a novel by Ernest Hemingway.
ANSWER: The Sun Also Rises
6. This was the name of the first vehicle planned for the canceled Constellation program of missions to the Moon and Mars, and is the name of the first nebula to be photographed. The constellation of this name contains a red giant 950 times as large as the Sun, as well as the gamma star Bellatrix. The two primary stars of this constellation have names meaning "the left leg of the giant" and "the giant's shoulder." For 10 points, Rigel and Betelgeuse (BAY-tell-"juice") are found in what constellation with both a "sword" and a "belt"?

## ANSWER: Orion

7. One type of this field, arising from a problem proposed by Johann Bernoulli (ber-NOO-lee), is the one "of variations." This field solves Zeno's dichotomy paradox by showing that the distances traveled are equivalent to a convergent series, as an infinite number of those distances can be summed to equal a non-infinite number by use of the integral. That function, along with the derivative, is in the realm of, for 10 points, what branch of mathematics invented independently by Newton and Leibniz (LIBE-nitz)? ANSWER: calculus

081-10-24-07123
8. In the final stanza of this poem, the speaker asks the addressee to roll all of their strength and sweetness "up into one ball." Earlier, he describes finding rubies along the Ganges River and notes that before him lay "deserts of vast eternity." The speaker of this poem would spend hundreds of years admiring the addressee's body and wait for her "till the conversion of the Jews," but unfortunately he hears "time's winged chariot hurrying near." Beginning with the line "Had we but world enough, and time," this is, for 10 points, what poem by Andrew Marvell?
ANSWER: "To His Coy Mistress"
083-10-24-07124
9. The compound AZT is typically used to inhibit one specific example of this group. Members of this group can replicate using either the lysogenic or lytic cycles. One member of this group named T4 is known for attacking E. coli. These entities have a protein coat called a capsid. Members of this group that attack bacteria are called bacteriophages (back-TEER-ee-oh-FAY-jezz). For 10 points, name this group of infectious agents, which includes the tobacco mosaic and influenza varieties.
ANSWER: viruses [or HIV before "example" is read; or human immunodeficiency virus before "example" is read; or AIDS before "example" is read; or acquired immunodeficiency syndrome before "example" is read]

064-10-24-07125
10. The treaty ending this war required the dismantling of French fortifications at Dunkirk, and ceded Savoy and Nice to Victor Amadeus II. The main treaty ending this war was supplemented by the treaties of Rastadt and Baden. Its corresponding war in America was known as Queen Anne's War. The Duke of Marlborough won the Battle of Blenheim (BLEN-em) during this war. This war started after Charles II died and left his throne to a member of the House of Bourbon. For 10 points, name this early eighteenth-century war that was ended by the Peace of Utrecht.
ANSWER: War of the Spanish Succession
030-10-24-07126
11. Characters in this novel eventually discover that the royal python was killed by Enoch. Its main character gains respectability by throwing "the cat." One figure of authority in this book is the Oracle of the Hills and Caves. In this novel, a school is built by Mr. Brown, who is a missionary sent to the village. The central figure is exiled for killing Ikemefuna (IK-ey-muh-FOO-nuh). For 10 points, name this novel, which is about the downfall of Okonkwo in British-colonized Nigeria and was written by Chinua Achebe. ANSWER: Things Fall Apart

001-10-24-07127
12. Robert Southey's (SUTH-ee's) biography of this individual described the impact of this man's uncle Maurice Suckling on his career. This man lost an arm while leading an assault on Tenerife (TEN-uh-REE-fay), and he lost an eye at the Battle of Calvi. This man had an affair with Emma Hamilton. This man nearly destroyed the French fleet at Aboukir (AH-boo-keer) Bay, and he commanded the H.M.S. Victory in his last battle. For 10 points, name this British admiral who died while leading the British navy to victory at the Battle of Trafalgar.
ANSWER: Horatio Nelson
030-10-24-07128
13. When Finn Maccool met his wife, Sadhbh (SAHV), she was in the form of this animal. Four of these animals attack the World-Tree Yggdrasil (EEG-drah-seel) in Norse myth. In Greek myth, Heracles pursues one of these animals for a year as one of his labors. That Ceryneian (keh-rih-NAY-uhn) one of these animals belonged to Artemis, whose chariot is pulled by these animals, and who turns Actaeon (ack-TAY-on) into one of them. For 10 points, name this horned animal, which is hunted by hounds. ANSWER: deer [or harts; or stag]

080-10-24-07129
14. In this story, signs advertising a restaurant note that the proprietor is "The Fat Boy With the Happy Laugh" and "A Veteran." That restaurant in this story is named The Tower and its owner is Red Sammy Butts, who is insulted by June Star following her dance routine. John Wesley describes Tennessee as being a "hillbilly dumping ground" in this work, which also includes the cat Pitty Sing. For 10 points, name this story by Flannery O'Connor in which the Misfit murders the Grandmother.
ANSWER: "A Good Man is Hard to Find"
030-10-24-07130
15. One character in this opera announces his profession in the aria "Der vogelfänger bin ich ja" (DER FOH-gehl-FON-ger BIN ICK YAH) before having his mouth padlocked. The aria "O Isis und Osiris" is sung by Sarastro (sah-RAHSS-tro), whose servant Monostatos (mah-NO-stah-TOSSE) tries to take away the love interest of the protagonist. In this opera, Tamino is asked by the Queen of the Night to find her daughter Pamina with the aid of the bird catcher Papageno (PA-pa-jee-NOE) and the title musical instrument. For 10 points, name this opera by Wolfgang Amadeus Mozart.
ANSWER: The Magic Flute [or Die Zauberflöte]

1. Thiourea (THY-oh-yu-REE-uh) blocks the action of compounds released by this body part. One hormone excreted by it induces the metamorphosis of frogs. It contains a pyramidal lobe. Overactivity of this gland can result in Graves' disease. It regulates blood calcium levels by releasing calcitonin (CAL-sih-TOE-nin). Proper functioning of this gland requires iodine. For 10 points, name this gland in the neck that helps regulate metabolism and can be afflicted with goiters (GOY-ters).
ANSWER: thyroid
001-10-24-07132
2. This man commented that John Milton was a "true poet, and of the devil's party without knowing it." Los attempts to reunite the four parts of Albion in this man's mythological work The Four Zoas. He frequently made his own engravings to accompany his poems, such as "The Sick Rose." One of his poems describes a creature "burning bright / in the forests of the night." For 10 points, name this British Romantic poet of "The Tyger."
ANSWER: William Blake
080-10-24-07133
3. Given the vapor pressure and the heat of vaporization at a certain temperature, the value of this quantity can be calculated using the Clausius-Clapeyron (CLOW-see-us klah-PAY-ron) equation. For roughly every 300 meter increase in elevation, this quantity drops by one degree Celsius. It is defined as the temperature at which the vapor pressure of a liquid equals the environmental pressure. For 10 points, name this quantity which in standard conditions is 100 degrees Celsius for water.
ANSWER: boiling point
020-10-24-07134
4. The early succession of this dynasty was manipulated by the wife of its first emperor, Empress Lu. This dynasty was interrupted by the fundamentalist Xin (SHIN) dynasty of Wang Mang (WONG MONG). After its fall, there ensued a 400 year "Period of Disunion," which included the Three Kingdoms period. It was founded after Liu Bang (LOO BANG), or Gaozu (gow-ZOO), overthrew the Second Emperor of the Qin (CHIN) Dynasty. For 10 points, name this dynasty that ruled from 208 BCE to 220 CE and names the ethnic majority of China.
ANSWER: Han Dynasty
080-10-24-07135
5. This ruler ordered the arrest of his enemies in Parliament, known as the Five Members. He raised controversy by demanding Ship Money annually and by marrying the Catholic princess Henrietta Maria. This king ruled throughout the Eleven Years' Tyranny, which was ended by the summoning of the Short Parliament. The New Model Army was raised against this ruler by Oliver Cromwell. For 10 points, name this son of James I, who was beheaded during the English Civil War.
ANSWER: Charles I of England [prompt on Charles]
080-10-24-07136
What Gian Carlo Menotti opera about a crippled child who receives the Three Wise Men was the first opera written to premiere on broadcast television?
ANSWER: Amahl and the Night Visitors

This is a calculation question. Solve for x in $8 \mathrm{x}-3=2 \mathrm{x}+7.5$.
ANSWER: $\mathrm{x}=\underline{\mathbf{1 . 7 5}}[$ or $\mathrm{x}=\underline{7 / 4}$ ]

