Tossups:

**This character is mourned by an owl, a raven, and a dove. A rival pulls this character's bodice laces too tight, causing her to faint, and brushes this girl's hair with a poisoned comb. A hunter pretends to bring the (\*)** organs of this girl to the queen, whose magic mirror tells her that this character has gone to live with seven dwarves. For 10 points, name this protagonist of a Grimm brothers fairy tale, a pale-skinned princess.

Answer: Little **Snow-White** (accept **Schneewittchen**)

<LIT, EURO>

**In response to this event, Gaius Cassius Longinus was targeted in the Liberators' Civil War. This event started with a distraction by Tillius Cimber, which allowed Servilius Casca to (\*)** stab the target of this event. In the aftermath of this event, the Second Triumvirate defeated its conspirators at Phillippi. For 10 points, name this event in which one man may have asked "Et tu?" after being stabbed by Brutus on the Ides of March.

Answer: the **assassination** of Gaius Julius **Caesar** (accept **death** of Gaius Julius **Caesar** or equivalents; prompt on "Ides of March" or "Idus Martii")

<HIST, OTHER>

**Muslim residents of this city are required to travel to the Masjid-e-Aisha and return to a holy place in this city. This city is located in the Desert of Paran, where Allah created the Zamzam Well for Hajar and Ismail. The (\*)** Black Stone is set in silver in this city's Kaaba [kah-ah-bah], around which pilgrims walk during the Hajj, and toward which Muslims face when praying. For 10 points, name this Islamic holy city, the birthplace of Muhammad.

Answer: **Mecca** (accept **Makkah**)

<RMPSS, REL>

**Gail Halvorsen earned the nickname "Wiggly Wings" while airlifting supplies to this city, and a diplomat's attempt to cross a border in this city led to a standoff at Checkpoint Charlie. This city was originally split among the British, French, and (\*)** Americans, and while giving a speech in this city, Ronald Reagan said "tear down this wall!" For 10 points, name this city, whose Soviet-ruled eastern half was separated from it by a namesake wall.

Answer: **West Berlin** (prompt on "Berlin;" do not accept "East Berlin")

<HIST, EURO>

**This number to the infinity power is an indeterminate form commonly seen in the limit definition of e. This value is found in the numerators of terms in the harmonic series. It is the derivative of (\*)** x. There are this many even prime numbers, and a line is an object with this many dimensions. For 10 points, name this first natural number, which is the multiplicative identity because values do not change when multiplied by it.

Answer: **one**

<SCI, OTHER>

**Olivier Messiaen titled one of these musical works *Turangalila* [too-RON-gah-LEE-lah]. The Largo movement of one of these works inspired the song "Goin' Home." One of these opens its Andante movement with fifteen and a half bars of soft theme followed by a (\*)** sudden loud chord, while another of these works opens with a "short-short-short long" motif. For 10 points, name this usually four-movement genre of music exemplified by Dvorak's [duh-VOHR-zhok's] *From the New World*, Haydn's [HY-din's] *Surprise*, and Beethoven's Fifth.

Answer: **symphony**

<FA, AUDIO>

**A couple in this short story discuss shortening the name "Dillingham" to "D" on a letterbox, and a character has a meeting with Madame Sofronie. One of this work's protagonists pays twenty-one dollars for a platinum (\*)** chain after losing a "cascade of brown waters" that fell past her knees. Della cuts her hair to buy a watch fob and Jim sells his watch to buy combs in, for 10 points, what O. Henry short story about ironic Christmas gifts?

Answer: The **Gift of the Magi**

<LIT, AMER>

**A less virulent version of this disease is alastrim. This disease is caused by the variola virus, and the major symptom of this illness is fluid-filled macules which then blister, forming scars. Dr Edward (\*)** Jenner developed the first vaccine against this disease by studying a related illness in milkmaids, and it was declared eradicated in 1979. For 10 points, name this infectious disease that killed many natives of the Americas and was probably a mutated form of cowpox.

Answer: **smallpox** (prompt on "pox")

<SCI, BIO>

**This deity fathered the three judges of the underworld, including Rhadamanthus and Minos, in addition to the three Graces. This god had a son with the mortal Alcmene, and his son Orion was accidentally killed by this god's daughter (\*)** Artemis. This god fathered the hero son Heracles, gave birth to Dionysus from his thigh, and was the father of Ares with his wife, Hera. For 10 points, name this philandering Greek king of the gods.

Answer: **Zeus** Pater

<RMPSS, MYTH>

**A vaporizing injector is used in one variety of this lab technique that employs an inert gas as the carrier. The retention factor can identify substances by this process, which makes use of stationary and mobile phases. Silica gel is used in the (\***) thin-layer type of this process, while paper can be used to split black ink into different pigments in the column type of this. For 10 points, name this chemistry technique that separates mixtures whose components have different solubilities.

Answer: **chromatography**

<SCI, CHEM>

**This man authorized John Sullivan to attack the Iroquois. This man was defeated by Louis Coulon de Villiers, and was forced to surrender Fort Necessity, a move which prompted the (\*)** Braddock expedition. This general was criticised by Thomas Conway after failing to defend against the Philadelphia Campaign, and he surprised Hessian soldiers after crossing the Delaware River. For 10 points, name this first President of the United States.

Answer: George **Washington**

<HIST, AMER>

**In this work, Hygd rejects Heardred's [HERD-red] claim to the throne, and after Aeschere [ASH-hayr-ay] is killed, Hrunting [h-RUN-ting] is loaned to this poem's title figure as he dives into the sea. (\*)** Wiglaf helps kill a dragon in this epic poem, whose title Geat ["gate"] kills an underwater creature who had invaded the mead-hall Heorot [HAY-oh-roht] to avenge her son's death. For 10 points, name this Old English

epic poem about the slayer of Grendel. Answer: **Beowulf**

<LIT, BRIT>

**A building in this city, commissioned by Maurice de Sully, includes an early use of flying buttresses and a large rose window. Great thinkers are honored in this city's Pantheon [pon-tay-OHN], and this city contains a glass pyramid designed by I.M. Pei, ["pay"] as well as the (\*)** Arc de Triomphe [ark duh tree-OMF], on the right bank of the Seine River [sehn river]. The Louvre [loov], the Notre Dame [noh-truh DOM] cathedral, and the Eiffel Tower are in, for 10 points, what capital city of France?

Answer: **Paris**, France

<GEO, GEO>

**The Aitken Basin lies near this body's south pole. One theory for the creation of this body involves a collision with the ancient planet Theia [THAY-ah]. This body's "ranging experiment" is an attempt to determine the (\*)** distance between the Earth and this object, which is about 238,000 miles. This body contains multiple plains known as marias, which include the Sea of Tranquility. For 10 points, name this satellite of Earth which was walked on by Neil Armstrong.

Answer: **moon** (accept **Luna**)

<SCI, OTHER>

**One of this author's protagonists is infuriated when Troukhatchevsky [troh-kah-CHEV-skee] plays a duet with his wife in this man's *Kreutzer Sonata* [KROY-tzer sonata]. This author created a character who is injured at the Battle of Borodino after marrying Natalie Rostova, and a judge who is injured while hanging curtains in "The Death of (\*)** Ivan Ilych." Count Vronsky's lover throws herself under a train in this man's novel *Anna Karenina*. For 10 points, name this Russian author of *War and Peace*.

Answer: Lev (or Leo) Nikolayevich **Tolstoy**

<FA, AUDIO>

**This actor was cast in *Cursed Part 3* while waiting tables at Bubba Gump's, and he plays a man who acts out scenes from *Road House* to entertain a debate watch party. This actor portrayed a wildlife specialist on Isla Nublar who helps Zach and Gray survive, and this man pilots (\*)** Milano and receives "Awesome Mix, Vol 1" from his dying mother in his role as Star-Lord. For 10 points, name this actor who played Andy on *Parks and Rec* and velociraptor trainer Owen Grady in *Jurassic World*.

Answer: Chris(topher) Michael **Pratt**

<TRASH, POP CULT>

**While aboard the *USS Abraham Lincoln*, this man gave a speech while a banner reading "mission accomplished" hung in the background. In another speech, this man claimed that North Korea was part of an "Axis of Evil." This president was criticized for continuing to (\*)** read "My Pet Goat" after he was informed of an attack on the World Trade Center. For 10 points, name this President of the United States who declared war after the September 11th attacks.

Answer: George **W**alker **Bush** (accept **Bush 43**; accept descriptions like "**Bush** the **younger**;"prompt on "Bush" or "George Bush;" do not accept Bush 41; do not accept George Herbert Walker Bush)

<HIST, AMER>

**This nation controls Mawson Peak, an active volcano on Heard Island near Antarctica. One feature off its coast stretches from Lady Elliot Island to the Torres Strait. This continent's Snowy Mountains contain its highest point, Mount Kosciuszko [koh-SHOO-skoh], and its east is split by the Great (\*)** Dividing Range. This continent contains Ayers Rock, a massive rock formation called Uluru by the Aborigines. The Great Barrier Reef surrounds, for 10 points, what island continent?

Answer: **Australia**

<GEO, GEO>

**The calculation of one form of this quantity requires setting a reference level, and for a spring, this quantity equals one-half times a constant times displacement squared. Pole-vaulters take advantage of the pole's ability to store the (\*)** elastic form of this quantity, and multiplying weight times height gives its gravitational type. Also stored within chemical bonds is, for 10 points, what quantity, that a roller coaster converts to kinetic energy at the bottom of a hill?

Answer: **potential energy** (prompt on "energy" alone)

<SCI, PHYS>

**If proper protocol is not followed after one of these events, Second Impact Syndrome may occur. The repetition of these events causes a condition discovered by Dr. Bennett Omalu called chronic traumatic (\*)** encephalopathy, or CTE, which has been observed in autopsies of professional boxers and football players. For

10 points, name these mild traumatic brain injuries in which a force causes the brain to strike the skull. Answer: **concussion**s (accept **m**ild traumatic **b**rain **i**njuries before mentioned)

<SCI, BIO>

**In this organ, proper contraction of papillary muscles prevents click-murmur syndrome. This organ, whose Purkinje [per-KIN-jee] fibers may be damaged by infarction, contains the Bundle of His. It can be examined through (\*)** EKG, and its myocardium is fed oxygen by coronary arteries. Ventricles and atria make

up its four chambers. For 10 points, name this origin of the aorta, the organ which pumps blood through the body.

Answer: **heart**

<SCI, BIO>

**The study of these institutions led Gustave de Beaumont and Alexis de Tocqueville [TOH-kuh-vill] to write *Democracy in America*. Michel Foucault [mee-SHELL foo-KOH] discussed Jeremy Bentham's idealized version of this institution, Panopticon, in the book (\*)** *Discipline and Punish*. Philip Zimbardo simulated one of these in an experiment at Stanford University, whose participants were either guards or inmates. For 10 points, name these institutions that hold convicted criminals.

Answer: **prison**s (accept equivalents such as **detention center**s or **jail**s)

<RMPSS, SOC SCI>

**This god's crown is adorned with two ostrich feathers, and his wife anointed a djed column after finding his body inside it. This god was tricked into entering a coffin by his brother, Set, who threw him into the Nile. This (\*)** green-skinned father of Horus was brought back to life by his wife, Isis. For 10 points, name this Egyptian god, who replaced Anubis as king of the dead.

Answer: **Osiris** (accept **Usiris**; accept **Aser**)

<RMPSS, MYTH>

**One of these organizations was created by John Lewis and merged with one created by Samuel Gompers. Another one of these organizations was led by Terence Powderly and lost its public support after the (\*)** Haymarket Square Riots. A large one of these organizations is headquartered in Detroit, and its members work for companies such as Ford. For 10 points, name these organizations, exemplified by the United Auto Workers, which protects the rights of workers.

Answer: labor **union**s (accept trade **union**s)

<HIST, AMER>

**This artist worked on the film *Destino* with Walt Disney and painted a dodecahedron in the background of *The Sacrament of the Last Supper*. This creator of *Swans Reflecting Elephants* painted his wife Gala as *The Madonna of Port Lligat*, and painted a bare tree and a (\*)** deflated face in another work. Ants crawl across one of the soft-textured clocks in this man's painting *The Persistence of Memory*. For 10 points, name this Spanish surrealist.

Answer: Salvador (Domingo Felipe Jacinto) **Dali** (i Domenech)

<FA, VISUAL>

**In ancient times, the southern shore of this sea was split between Pontus, Paphlagonia, and Bithynia. The Strait of Kerch connects it to the oil-rich Sea of Azov, surrounding a peninsula home to (\*)** Yalta and Sevastopol. The Dniester [NEE-stur], Dnieper [NYE-pur], and Danube Rivers flow into the west shores of this sea. The Crimean Peninsula juts into, for ten points, what Asian sea north of Turkey?

Answer: **Black** Sea

<GEO, GEO>

**Materials made from this substance are classified using the TAS system and the QAPF diagram. This substance forms dacite and rhyolite, and the Deccan and Siberian traps were formed from it. Smooth and rough forms of this substance are designated (\*)** pahoehoe [pah-HOH-ay-hoh-ay] and a'a [AH-ah]. Pumice and obsidian glass result from its cooling. For 10 points, name this molten rock that forms igneous rocks and comes out of volcanos.

Answer: **lava** (accept **magma;** prompt on "molten rock" or equivalents until it is read)

<SCI, OTHER>

**In this work, Safie escapes a life in Turkey to live with Felix. This novel's frame story consists of letters from Captain Walton, who hears a confession regarding the deaths of William and Henry Clerval. The title scientist mourns (\*)** Elizabeth Lavenza on his wedding night after he attempts to create a living being from the corpses of convicts. For 10 points, name this Mary Shelley novel in which the title scientist is pursued by his hulking creation.

Answer: **Frankenstein**; or, The Modern Prometheus

<LIT, BRIT>

**A former first lady of this country was nicknamed "Steel Butterfly" and fled during the People's Power Revolution. Douglas MacArthur stated "I will return" after being forced to retreat from this country. This country's independence movement was led by (\*)** Emilio Aguinaldo, but this country was put under US control after the Spanish-American War. For 10 points, name this island nation led from Manila.

Answer: Republic of the **Philippines**

<HIST, WORLD>

**The protagonist of this work is invited to a witches' sabbath by Mistress Hibbins. A child in this work notices that the sunlight avoids her mother when they go to the forest. In this novel, Roger (\*)** Chillingworth arrives in New England to find his wife has been imprisoned for having an affair with Reverend Arthur Dimmesdale. Pearl is the daughter of Hester Prynne, who is forced to wear the title symbol as a sign of her adultery in, for 10 points, what novel by Nathaniel Hawthorne?

Answer: The **Scarlet Letter**

<LIT, AMER>

**Under anaerobic conditions, this process follows glycolysis, and some bacteria can change lactose to lactic acid by this process. The general form of this process yields no ATP but does convert (\*)** sugars into byproducts such as carbon dioxide and ethanol. For 10 points, name this process, which can be carried out by yeast and generates foods like cheese, wine, and beer.

Answer: **fermentation** (accept word forms, such as **ferment**)

<SCI, BIO>

**The player can gain one of these items by removing the Hellkite Dragon's tail in *Dark Souls.* In *League of Legends*, activating Shen's "Q" throws a "Vorpal" one at an enemy, and in *Warcraft* lore, Ashbringer is one of these that belongs to Tirion Fordring, a (\*)** paladin. Cloud uses a "buster" one of these, and in *Halo*, Elites often wield an "energy" type. For 10 points, katanas are a type of what class of weapon that is often used with a shield?

Answer: **sword**s (accept elaboration such as **short-sword**s, **greatsword**s, or **blade**s; do not accept **dagger**s or **knife**/ves)

<TRASH, POP CULT>

**This figure promised to display the "Sign of Jonah" and was discovered sitting among the rabbis after disappearing as a child. Martha was rebuked for listening to this figure, who fasted in a desert for (\*)** forty days, saying "man does not live by bread alone." This religious leader ate a last meal with his disciples in Jerusalem, where Pontius Pilate had him crucified. For 10 points, name this man, the central figure of Christianity.

Answer: **Jesus** of Nazareth (accept Jesus **Christ**; prompt on "Messiah")

<RMPSS, REL>

**This colony's governor, William Berkeley, was targeted in Bacon's Rebellion, and the failure of the *Sea Venture* to reach America caused this colony to undergo the (\*)** "Starving Time." This colony pioneered elected legislators in its House of Burgesses, and members of this colony's "First Families" included Thomas Jefferson and John Rolfe. For 10 points, name this American colony, whose capital was Jamestown.

Answer: Colony of **Virginia** (accept **Virginia** Colony; accept Province of **Virginia**; accept Dominion and Colony of **Virginia**; accept Most Ancient Colloney and Dominion of **Virginia**; accept **Jamestown** until "House of Burgesses" is read)

<HIST, AMER>

**This figure names a novel by Thomas Mann in which brilliant composer Adrian Leverkiihn [LAY-vayr-koon] goes mad, as well as a play by Johann Goethe [GUH-tuh], in which a poodle helps this man woo Gretchen after it transforms into (\*)** Mephistopheles. In a play by Marlowe, this man only uses the powers he gets from Lucifer for practical jokes, and realizes he has wasted his contract. For 10 points, name this legendary German man, who sells his soul to the devil for knowledge or skill.

Answer: **Faust** (accept Doctor Heinrich **Faustus**; accept **Adrian** or **Leverkiihn** until those words are read)

<LIT, EURO>

**If a function is differentiable at a point, one of these geometric figures can serve as a first-order approximation of the function at that point. These mathematical entities are defined by Euclid's second axiom, or by their gradient and a point. One of these called the (\*)** directrix helps define a parabola, and two of these that intersect define a plane. The formula "y equals m x plus b" describes, for 10 points, what degree-one polynomials with constant slope and no endpoints?

Answer: **line**s (accept **line**ar equation or function; accept **degree-one polynomial**s or equivalents such as **first degree polynomial**s before "degree-one" is read; do not accept "line segment" or "ray")

<SCI, OTHER>

**When this D-major piece is played at the Last Night of the Proms, the audience traditionally bobs up and down, then waves British flags and sings the hymn (\*)** "Land of Hope and Glory" to its famous trio section. This march premiered in 1905, and is now used annually at Yale University. For 10 points, name this march by Sir Edward Elgar that is commonly played during high school and college graduation ceremonies.

Answer: **Pomp and Circumstance** Military March No. 1

<FA, AUDIO>

**The wave nature of these particles was confirmed by the Davisson-Germer experiment. They are emitted in beta decay and the photoelectric effect, and these leptons drop to the lowest (\*)** unoccupied energy state to produce spectral lines. Their movement produces current. For ten points, name these particles that orbit the nucleus and are attracted to protons because of their negative charge.

Answer: **electron**s

<SCI, PHYS>

**During one occupation of this country, citizens used the symbol H7 to show they stood with their king Haakon VII, and during that occupation, Vidkun Quisling ruled a puppet government for Nazi officials. Charles XIII joined this (\*)** fjord-filled nation with its eastern neighbor, Sweden. For 10 points, name this Scandinavian country with capital at Oslo.

Answer: Kingdom of **Norway**

<HIST, EURO>

**This poet wrote about a bird who "bit an Angle Worm in halves / And ate the fellow, raw," and about another creature who "never - in Extremity, / [asked] a crumb - of me." This poet of (\*)** "'Hope' is a thing with feathers" wrote about "the Stillness in the Room" around her deathbed, and about a figure who "kindly stopped for me." The reclusive "Belle of Amherst" who wrote "I heard a Fly buzz -- when I died" is, for 10 points, what American poet who wrote "Because I could not stop for Death?"

Answer: Emily Elizabeth **Dickinson**

<LIT, AMER>

**An unpublished collection of these works by Allen Ginsberg begins by describing him drinking sugarless tea. A poem in this style describes the "sound of water" after a frog jumps into an old pond, and was written by a master of this style, Matsuo Basho. These poems are written in (\*)** seventeen characters, and use "cutting words" to divide contrasting images of nature. For 10 points, name these Japanese poems written with lines of five, seven, and five syllables.

Answer: **haiku** (accept **hokku**; prompt on "poem" before it is read)

<LIT, OTHER>

**With his nephew, this god was commanded by Laomedon to build the walls of Troy, and he gave the gift of a freshwater spring to Athens. He captured Demeter by transforming into a stallion, and this god of horses cursed Odysseus for blinding his son (\*)** Polyphemus. This son of Cronos and Rhea was an Olympian god who wielded a trident. For 10 points, name this brother of Zeus, the Greek god of the sea.

Answer: **Poseidon** (accept **Apollo** before "nephew" is read; do not accept Neptune)

<RMPSS, MYTH>

**The term "War Hawk" was first used to describe supporters of this war, and during the lead up to this war the Chesapeake-Leopard affair led to outrage over impressment. Despite the signing of the Treaty of (\*)** Ghent, Andrew Jackson fought a battle at New Orleans in this war. During one event in this war, Dolly Madison was forced to flee the capital. For 10 points, name this war during which the British burned Washington D.C

Answer: **War of 1812**

<HIST, AMER>

**Believers of this faith say "ani ma'amin" [ah-nee maa-aa-meen] while reciting thirteen articles of faith composed by Maimonides [my-MON-ih-dees]. Teachers of this religion must learn halakhah, including six hundred thirteen mitzvot, or commandments, given on Mount (\*)** Sinai. Members of this faith celebrate Seder [say-der] in memory of the Passover, when Moses led this faith's believers out of slavery. For 10 points, name this religion, whose Patriarchs are Abraham, Isaac, and Jacob.

Answer: **Judaism** (accept **Jewish** people or faith; accept **Jew**s; accept **Yehudi**m; do not accept other Abrahamic religions, such as "Christianity")

<RMPSS, REL>

**A "Southern" group with this name contains Aoraki, or Mount Cook, in New Zealand. Karl Blodig climbed all major "four-thousanders" in the European range of this name. Lakes Lucerne and (\*)** Geneva, as well as the origins of the Rhone and the Rhine Rivers, are found in this range. Mont Blanc and the Matterhorn are tall peaks in, for ten points, what mountain range on the border between Switzerland and Italy? Answer: **Alps** (accept **Southern Alps**)

<GEO, GEO>

**Salts of this element were once administered intramuscularly as a method of treating rheumatoid arthritis. Aqua regia, a mixture of nitric and hydrochloric acid, was given the nickname "royal water" for its ability to dissolve this element. (\*)** Ernest Rutherford proved the existence of the atomic nucleus using a thin foil of this element, which is found below silver on the periodic table. For 10 points, name this heavy transition metal with symbol Au.

Answer: **gold** (accept **aurum**; prompt on "Au" before it is read)

<SCI, CHEM>

**Bernini sculpted this figure scowling and preparing his weapon to attack. Another depiction of this figure wears only a hat and boots and stands on his opponent's head; that depiction was cast in bronze by (\*)** Donatello. A marble statue of this biblical figure shows him standing contrapposto with a slingshot draped over his shoulder. Michelangelo sculpted, for 10 points, what king who slew Goliath?

Answer: King **David** (accept **Dawud**)

<RMPSS, REL>

**5261 Eureka is a trojan of this body, whose regions include the Hellas Planitia and the Valles Marineris, the latter being named for the Mariner mission. Another mission to this planet landed using a "sky crane" but never reached its volcano, (\*)** Olympus Mons, as it focused on evidence of water. This destination of the *Curiosity* rover has moons Phobos and Deimos. To date, no evidence of life has yet been found on, for 10 points, what so-called "Red Planet?"

Answer: **Mars** (prompt on the "Red Planet" before it is read)

<SCI, OTHER>

**This work's protagonist is nursed by Skeet and wins a bet against Matthewson. Charles and Mercedes drown after Hal is attacked in this novel, and the protagonist wins a fight against Spitz after being trained by a man in a red sweater. When Yeehat tribesmen kill (\*)** John Thornton in this novel, Buck goes to live with wolves and becomes known as a "Ghost Dog." For 10 points, name this novel by Jack London, contrasted with *White Fang*.

Answer: The **Call of the Wild**

<LIT, AMER>

**The Rock Edicts were created by one follower of this religion, and that follower, Ashoka the Great, converted to this religion after the bloodshed of the Kalinga War. Anagarika (\*)** Dharmapala helped revive this religion through the Maha Bodhi Society. This religion was partially revived in India when the fourteenth Dalai Lama fled Tibet. For 10 points, name this nirvana-seeking religion which follows the teachings of Gautama.

Answer: **Buddhism**

<RMPSS, REL>

**The operator for an incremental version of this operation inspired the name of an offshoot of the C programming language. This operation can be done on two matrices if their dimensions are identical. A sequence is (\*)** arithmetic if its terms can be found by using this operation repeatedly with the same value. The identity of this operation is zero. For 10 points, name this basic arithmetic operation, the inverse of subtraction. Answer: **addition** (accept **summation**; accept word forms like **add**ing; accept **plus**; accept **C++**)

<SCI, OTHER>

**This condition is the subject of the Pacman conjecture, and government restrictions can lead to the "coercive" type of it. Economies of scale help create the "natural" type, which includes utilities like electricity, water, and telecommunications. This (\*)** market structure often occurs due to high barriers to entry, and it leads to higher prices due to lack of competition. For 10 points, name this market structure in which there

is only one seller. Answer: **monopoly**

<RMPSS, SOC SCI>

**This novel's protagonist plays with Topper and Fred at a dinner party when he forgets he is invisible, and he meets two children named Ignorance and Want. In this novel, the protagonist relives a ball hosted by Mr (\*)** Fezziwig, meets his dead partner, Jacob Marley, and sends an enormous turkey to Bob Cratchit and Tiny Tim. For 10 points, name this work by Charles Dickens, in which Ebenezer Scrooge learns the meaning of the title holiday.

Answer: A **Christmas Carol**

<LIT, BRIT>

**This man admitted to plagiarizing Daniel Clowes for his film *Howard Cantour.com*, a move which prompted him to wear a bag over his head that stated "I'm not famous anymore." This actor appears at the end of a Rob Cantor video which labels him an (\*)** "actual cannibal." In one role this actor buys a 1969 Camaro which is secretly the autobot Bumblebee. For 10 points, who is this actor that played Sam Witwicky in the first three Transformers films?

Answer: Shia Saide **LaBeouf**

<TRASH, POP CULT>

**This politician stated that American citizens were having a "crisis of confidence" in his Malaise speech. This president organized a meeting between Menachem Begin and Anwar Sadat, and this president's hopes for reelection were lost after the failure of Operation (\*)** Eagle Claw, an attempt to end the Iran Hostage Crisis. The Camp David Accords were brokered by, for 10 points, what President who lost the election of 1980

to Ronald Reagan and won a Nobel Peace Prize for his work with Habitat for Humanity? Answer: James Earl "Jimmy" **Carter**, Jr

<HIST, AMER>

***Cuon* [CUE-on] and *Lycaon* [lie-KAY-un] are two genuses that split from this taxonomic group, leading to the dhole [dohl] and "painted" species, respectively. Evolution within this genus inspired an ongoing Russian study of foxes, and (\*)** domestication of these animals likely began when its members scavenged human garbage dumps. Darwin described the artificial selection within this genus that produced breeds like spaniel and terrier. For 10 points, name this genus that includes wolves and dogs.

Answer: **Canis** (accept **canine**s; accept **dog**s before it is read)

<SCI, BIO>

**Retreating huscarls in this battle made a failed, last ditch stand in the Malfosse, wounding Eustace of Boulogne. This battle was commemorated by a work commissioned by Odo, Earl of Kent. The loser of this battle was weakened by his victory over Harald Hardrada a month earlier at (\*)** Stamford Bridge. For 10 points, name this battle, commemorated in the Bayeux [bah-YOO] embroidery, in which Harold Godwinson was defeated by William the Conqueror, leading to the 1066 Norman conquest of England.

Answer: Battle of **Hastings**

<HIST, EURO>

**In the *Prose Brut*, a chronicle of Britain, this man's mother is listed as Adhan [a-than], and Geoffrey of Monmouth's *Historia* recounts this character helping Vortigern discover two dragons beneath his castle. This character is tricked by (\*)** Nimue after living his life backwards. In various tales, he predicted the triumph of King Uther, mentored Morgan Le Fay, and created the Round Table. For 10 points, name this wizard companion of King Arthur.

Answer: **Merlin** (accept Ambrosius **Merlin** or **Merlin** Ambrosius; accept **Ambrose** Merlin)

<RMPSS, MYTH>

**Thermal and fast breeders produce material that undergoes this process that occurred at Chicago Pile-1. Water acts as a moderator and coolant in buildings that implement this process, which is sustained once the material reaches (\*)** critical mass. For 10 points, name this reaction in which an isotope such as plutonium-239 or uranium-235 is split, producing energy, that was the focus of the Manhattan project.

Answer: nuclear **fission**

<SCI, PHYS>

**This composer wrote "Per pieta, ben mio, perdona" to express Fiordiligi's [fee-YOR-dee-lee-gee's] rejection of Ferrando. This composer of *Cosi Fan Tutte* wrote the song "Der Holle Rache," in which a very high F is sung by the (\*)** Queen of the Night, to order Pamina to murder Sarastro. Another of his operas tells the story of Don Juan. For 10 points, name this Austrian composer of *Don Giovanni* and *The Magic Flute*.

Answer: Wolfgang Amadeus **Mozart**

<FA, AUDIO>

**One of these buildings, designed by Frank Gehry, contains a "Flower" atrium and is located in Bilbao, Spain. An "inverted Ziggurat" building of this type designed by Frank Lloyd Wright is named for (\*)** Guggenheim and contains a spiralling white walkway around which exhibits are placed. The MoMa is one of these buildings, and contains Calder's *Lobster Trap and Fish Tail*. For 10 points, name these buildings designed to hold the creations of artists.

Answer: art **museum**s (accept **museum**s of art; prompt on "Guggenheim" until it is read)

<FA, OTHER>

**In one story, this figure uses yam hills to trick passersby into counting to nine, causing them to vanish. This mythical man performed a series of tasks for the sky god, Nyame, capturing the Mmoboro wasp in a calabash and receiving all of the world's (\*)** stories in return. This god's legs became long and thin after they were pulled by eight ropes in a story told in Ghana. For 10 points, name this African trickster, often portrayed

as a spider.

Answer: Kwaku **Anansi**

<RMPSS, MYTH>

**This war was paused by treaties signed at Bruges and Troyes before essentially ending at the Battle of Castillon. One side in this war enjoyed victory when the Black Prince ambushed charging cavalry at (\*)** Poitiers and again when Charles d'Albret was killed at Agincourt; the other side of this war was inspired at Orleans by the leadership of Joan of Arc. For 10 points, name this war fought by England and France from 1337

to 1453, slightly over a century. Answer: **Hundred Years'** War

<HIST, EURO>

**This author's work, which was discovered by Miep Gies [meep gees], is set in the *achterhuis*. Most of this author's work is addressed to Kitty. This author's roommate, Albert Dussel, and her sister, Margot, feature in her (\*)** only book, which discusses a young romance with Peter van Pels and calisthenics routines in a secret annex in Amsterdam. For 10 points, name young girl who wrote a diary while hiding from the Nazis.

Answer: Annelies Marie "Anne" **Frank**

<HIST, EURO>

**In this work, Abimelech of Gerar swears an oath at Beersheba.This work includes the births of Ben-Ammi and Moab to a man who had protected two angels from a mob in Sodom. Characters in this book predict the deaths of a baker and a cupbearer, see a (\*)** rainbow that promises an end to worldwide flooding, and get cast out of the Garden of Eden. Joseph, Noah, and Adam appear in, for 10 points, what biblical book, in which "God created the heavens and the earth?"

Answer: Book of **Genesis** (accept **Bereishit**)

<RMPSS, REL>

**In this state, the Imperial Canal became blocked, forcing the creation of the Salton Sea. The General Sherman stands 275 feet tall over this state, which includes the western shores of Lake (\*)** Tahoe and west slopes of the Sierra Nevada. Sequoia National Park is in, for 10 points, what state where animal bones are preserved in the La Brea tar pits in downtown Los Angeles?

Answer: **California**

<GEO, GEO>

**This force is zero in d'Alembert's [dal-uhm-BAIR's] paradox, and Lord Rayleigh [RAY-lee] described its quadratic form. This force is negative six pi, times viscosity, times radius, times velocity at low Reynolds numbers, in (\*)** Stoke's law. This force is found by solving Bernoulli's equation for force and the science of aerodynamics seeks to minimize it. For 10 points, name this force that is opposed by thrust in aircraft.

Answer: **drag** force (accept **air resistance** or **fluid resistance**; prompt on "friction")

<SCI, PHYS>

**Lisa Murkowski's 2015 proposal regarding this object was blocked in Congress by the Ohio delegation; Sally Jewell, the Secretary of the Interior, enacted that Athabascan-championed proposal just prior to a presidential visit focusing on climate concerns in the (\*)** Arctic. After nearly one century of commemorating the twenty-fifth US president, it was renamed in 2015. For 10 points, name this tallest mountain in North America, formerly known as Mount McKinley.

Answer: **Denali** (accept Mount **McKinley** before it is read)

<GEO, GEO>

**The use of manmade sulfate aerosol types of these objects to combat global warming is discussed in the final chapter of *SuperFreakonomics*. Silver iodide is traditionally used to "seed" the formation of these objects, that may show anvil-heads and mares' tails. (\*)** Fog is a ground-level example of the stratus type of these objects whose cumulonimbus variety is a source of snow and rain. For 10 points, name these atmospheric masses of condensed water vapor that often have a white, fluffy appearance.

Answer: **cloud**s

<SCI, PHYS>

**This character is "impatient to mount and ride" while he waits for his friend to climb "by wooden stairs with stealthy tread to the belfry." Later in his namesake poem, this character crosses in a "hurry of hoofs" to (\*)** Medford Town before visiting Lexington and Concord. For 10 points, name this man, the subject of a Longfellow poem that begins "Listen my children, and you shall hear / of the midnight ride of" this man.

Answer: Paul **Revere**

<LIT, AMER>

**One of this man's "four great measures" was the passing of the Walker Tariff, and he was challenged by Abraham Lincoln's Spot Resolutions. During this man's administration, a dispute over Oregon made (\*)** "Fifty-four forty or fight!" a rallying cry. This Tennessee politician was labeled a "dark horse" after defeating Henry Clay in the Election of 1844. For 10 points, name this President who started the Mexican-American War. Answer: James K(nox) **Polk**

<HIST, AMER>

**New phosphodiester bonds are formed by ligase enzyme at the end of this process. *E.coli* grown in different isotopes of nitrogen were used by Meselson and Stahl to show that this process is semi-conservative. This process generates both a (\*)** leading and lagging strand, the latter containing Okazaki fragments. For 10 points, name this biological process in which polymerase pairs adenine to thymine and guanine to cytosine to duplicate genetic material.

Answer: **DNA replication**

<SCI, BIO>

**An admiral from this empire, Hayreddin Barbarossa, assisted France in the Siege of Nice. This empire's spread into the Mediterranean was limited by a loss at Lepanto to the Holy League. Leaders of this empire were protected by (\*)** Janissaries before they were dissolved by Mahmud II, and this "Sick Man of Europe" was targeted in the Gallipoli campaign. For 10 points, name this empire that was led by Suleiman the Magnificent out of Istanbul.

Answer: **Ottoman** Empire (do not accept Turkey)

<HIST, WORLD>

**Rho, phi, and z define points in a coordinate system named after these shapes. This shape can be created in three-dimensional Cartesian coordinates by setting the sum of the squares of any two of the three variables equal to a constant. Their surface area is found by summing their lateral area, which is a (\*)** rectangle, with their two circular bases. For 10 points, name these three dimensional shapes with volume equal

to pi times radius squared times height, commonly exemplified by cans. Answer: **cylinder**s

<SCI, OTHER>

**This composer wrote an opera including the magician Alcina on the Orlando Furioso story, as well as sets of violin concertos entitled *L'estro Armonico* and *La stravaganza*. He described "Languor caused by the heat" and "The barking dog" in a set of pieces written as part of *The* (\*)** *Contest Between Harmony and Invention* that begins with "La primavera," or "Spring." For 10 points, name this Italian composer, nicknamed the "Red Priest," famous for *The Four Seasons*.

Answer: Antonio Lucio **Vivaldi**

<FA, AUDIO>

**This man wrote *De Profundis*, as well as a poem that claims "each man kills the thing he loves," during his time in Reading Gaol ["redding jail"]. In one of this man's plays, Mrs Erlynne recovers a misplaced object, and in another (\*)** Algernon Moncrieff and Jack Worthing each pretend to have a certain name. Those plays are *Lady Windermere's Fan* and *The Importance of Being Earnest*. For 10 points, name this Irish author of *The Picture of Dorian Gray*.

Answer: Oscar (Fingal O'Flahertie Wills) **Wilde**

<LIT, EURO>

**While in the hospital, this character hides a flash drive behind a stick of gum in a vending machine. He was apparently killed outside a courthouse in the aftermath of a civil war over the (\*)** Super Hero Registration Act. This former SHIELD member often faces off against the Red Skull with sidekick Bucky Barnes. For 10 points, name this patriotic avenger who fights with a star-spangled shield.

Answer: **Captain America** (accept either name of **Steve**n **Rogers**; prompt on "The Captain" or "Cap")

<TRASH, POP CULT>

**This book is dedicated to a taxi driver and the woman who gave the story its subtitle. In one scene from this book, a character obtains a pair of silver boots after a production of Cinderella, and that man later lives in a zoo with Montana Wildhack after being abducted by (\*)** Tralfamadorians. Throughout this novel, a bird cries "Poo-tee-weet" and deaths are followed by the comment "so it goes." For 10 points, identify this Kurt Vonnegut novel about Billy Pilgrim and the bombing of Dresden.

Answer: **Slaughterhouse-Five**, or The Children's Crusade: A Duty-Dance with Death

<LIT, AMER>

**A bomb calorimeter measures the result of this process, which is highly exothermic. The incomplete form of this process produces harmful substances such as acetaldehyde or carbon monoxide. The spontaneous type of this event does not require an (\*)** ignition source, while hydrocarbons undergoing this process form water and carbon dioxide as products. Oxygen is a necessary reactant in, for 10 points, what process that may result in a fire?

Answer: **combust**ion (accept **burn**ing)

<SCI, CHEM>

**A five-month-long one of these events started in San Francisco and was an attempt to bring attention to the historical treatment of Native Americans. One of these events was led by Jacob Coxey after the Panic of 1893 caused widespread unemployment. In 1963, (\*)** Martin Luther King led one of these events named for Jobs and Freedom, at the end of which he gave his "I have a Dream" speech. For 10 points, name this act of walking to the capital of the United States.

Answer: **march**es on **Washington** DC (accept descriptions like "**walk**ing to **Washington**, DC" or "**protest**ing by **march**ing on **Washington** DC;" prompt on "marches" alone or anything that doesn't specify **Washington** DC)

<HIST, AMER>

**This author wrote about Old Ben in "The Bear," a short story from his collection *Go Down, Moses*. In one of this man's novels, Darl is sent to an insane asylum and the Bundren family travels to Jefferson, the seat of (\*)** Yoknapatawpha [YAWK-nah-pah-TAW-fah] County, to bury their mother, Addie. Another novel by this man concerns Benji, his sister Caddy, and his suicidal brother Quentin Compson. For 10 points, name the author of *As l Lay Dying* and *The Sound and the Fury*.

Answer: William Cuthbert **Faulkner**

<LIT, AMER>

**One ruler of this country constructed a statue of Buddha using weapons he confiscated in a "sword hunt," and the Dutch established a trading outpost on this country's Dejima island. In order to retain land, defeated generals in this country would commit (\*)** seppuku, and one *daimyo* in this country rose to power after winning the Battle of Sekigahara. For 10 points, name this country in which Tokugawa Ieyasu moved the capital to Tokyo after becoming Shogun.

Answer: State of **Japan** (accept **Nihon**-koku or **Nippon**-koku)

<HIST, WORLD>

**Gottfried Leibniz wrote a chapter-by-chapter rebuttal to one of this thinker's works. This man proposed that humans are born without innate ideas, and that the mind is a "tabula rasa" or "blank slate" in his (\*)** *Essay Concerning Human Understanding*. For 10 points, name this English philosopher who wrote *Two Treatises of Government* in which he cited life, liberty, and property as things the government must protect. Answer: John **Locke**

<RMPSS, SOC SCI>

**Many of these shapes are created due to constructive and destructive interference in a phenomenon named for Newton. Gaseous isotopes are separated through this type of motion, which has acceleration and velocity perpetually orthogonal, with acceleration that always points (\*)** inward. Centrifuges move samples along a path with this shape. For 10 points, name this shape whose circumference is equal to twice its radius times pi.

Answer: **circle**s (accept **circular** paths; accept **circular** motion; accept **ring**s; do not accept "ellipses")

<SCI, OTHER>

**This composer used a B-flat major Harpsichord Suite as the basis for his *Variations and Fugue on a Theme of Handel*, and he began another piece with the text "Blessed are they that mourn." He included the finale "Gaudeamus igitur" in a work written to thank the University of (\*)** Breslau for giving him an honorary degree. For 10 points, name this German composer of *A German Requiem* and the *Academic Festival Overture*, whose song "Good evening, good night" is now commonly known as his lullaby.

Answer: Johannes **Brahms**

<FA, AUDIO>

**During this battle, Joseph Hooker ordered the bombardment of Miller's Cornfield, and William French took "Bloody Lane." George McClellan didn't pursue retreating Confederates to Virginia, but the Union victory at this battle gave President (\*)** Lincoln the opportunity to issue the Emancipation Proclamation. For

10 points, name this September 17, 1862 battle that ended the invasion of Maryland, the bloodiest single-day battle in American history.

Answer: Battle of **Antietam** (accept Battle of **Sharpsburg**)

<HIST, AMER>

**This function appears in the denominator of all Taylor series, and can be approximated by Stirling's formula. The gamma function extends this operation to inputs other than positive integers, and it is defined as the number of (\*)** permutations for a number of objects. For 10 points, name the function, which finds the product of all natural numbers of an input value and below, which is designated by an exclamation point.

Answer: **factorial** (accept **gamma** function until it is read)

<SCI, OTHER>

**This compound can form the possible carcinogen bromate, but is still widely used in water purification. At ground level, this compound is a pollutant that cracks rubber. This compound is measured in Dobson units and is the subject of the (\*)** Montreal protocol, which led to the widespread replacement of CFCs. For 10 points, name this molecule with chemical formula 03 ["0-3"], which blocks UV rays in an important layer of the atmosphere.

Answer: **ozone** (accept **O3** before mention)

<SCI, CHEM>

**Initiates into the priesthood of this religion become Hounsi Kanzo, and may eventually become houngans and mambos. This religion's god is Bondye, who is served by the black tuxedo-wearing spirit of the dead, Baron Samedi. Papa Legba is one of this religion's spirits, known as (\*)** lwa [L0H-ah]. This religion is derived from Catholic and Yoruban beliefs and was founded in Haiti. For 10 points, name this religion, which doesn't actually use namesake "dolls."

Answer: Haitian **Vodou** (accept **Voodoo**)

<RMPSS, REL>

**In a story by this author, Phao replaces Akela after a battle with wild dogs, and in another, Kala Nag is the steed of the title "Toomai of the Elephants." A mongoose defends a family against two poisonous snakes in this man's tale, (\*)** "Rikki-Tikki-Tavi," and in another of his stories, Shere Khan is a tiger who threatens the companion of Bagheera and Baloo, a human child named Mowgli. For 10 points, name this English author of *The Jungle Book*.

Answer: Rudyard **Kipling**

<LIT, BRIT>

## **In this novel, Constance is poisoned by the former wife of the Comte de la Fere ["fair"], a woman who has a fleur-de-lis [flure-duh-LEE] brand on her shoulder. An affair between Queen Anne and the Duke of Buckingham is almost revealed in this novel by (\*)** Milady de Winter, but she is foiled by Aramis, Athos,

Porthos, and D'Artagnan [dar-tan-yan]. For 10 points, name this book by Alexandre Dumas about a small group of soldiers who use the motto "one for all and all for one."

Answer: The **Three Musketeers** (accept Les **Trois Mousquetaires**)

<LIT, EURO>

**This man became a "Defender of the Faith" after writing *Defense of the Seven Sacraments*, and Thomas More was executed after refusing to attend the coronation of this man's wife. This king seized land belonging to monasteries, a move supported by the Act of (\*)** Supremacy. That act made this man Head of the Church of England, a position he created to annul his marriage to Anne Boleyn. For 10 points, name this English King who was known for his many wives

Answer: King **Henry VIII** Tudor (prompt on "Henry")

<HIST, EURO>

**The flooding of this river creates seasonal varzea forests. A cliff on Nevado Mismi is the source of this river, which is called the Solimoes [soh-lee-MOYSH] until it meets the Rio Negro at Manaus. This river, whose delta nearly reaches (\*)** French Guiana, is the namesake habitat for a pink river dolphin. For ten points, name this massive South American river that flows through the largest rainforest on Earth.

Answer: **Amazon** River (accept **Solimoes** River until mention)

<GEO, GEO>

**This tissue is absent in the class Chondrichthyes [khan-DRIK-thee-eez], and this tissue's epiphyseal plates contain the Haversian canals. Hematopoietic [HEE-mat-oh-poh-YET-ik] stems cells form within long structures made of this tissue, which can suffer (\*)** rickets due to a lack of vitamin D or calcium. This tissue is made by osteoblasts and surrounds marrow. For 10 points, name this tissue that makes up the skeletal system.

Answer: **bone** tissue (accept **osseous** tissue)

<SCI, BIO>

**This team supposedly gave its rookie quarterback a blank DVD labeled "Gameplan." They traded their head coach in 2002 before losing to that coach in Super Bowl 37, and they controversially used a first round draft pick on kicker (\*)** Sebastian Janikowski. The late Al Davis sued the NFL multiple times while owning, for 10 points, what team, whose current players include receivers Michael Crabtree and Amari Cooper, and quarterback Derek Carr?

Answer: **Oakland Raiders** (accept either city or team name)

<TRASH, SPORTS>

**In Borges's [BOHR-hays's] "The Garden of Forking Paths," Professor Yu Tsun also holds this profession. In a Cooper novel titled after this profession, Harvey Birch is suspected of doing this job for the English, and this occupation finishes a John le Carre novel titled *Tinker, Tailor, Soldier,* (\*)** "this." Ian Fleming wrote about a man with this profession in novels like *Casino Royale*. For 10 points, name this profession held by secret agents like James Bond.

Answer: **spy** (accept clear equivalents; accept **secret agent** before it is read)

<TRASH, POP CULT>

**Polydectes ["polly"-dek-teez] ordered the death of this figure, whose blood formed coral reefs when it fell into the sea. This sister of Stheno [s-theh-noh] and Euryale [yoo-ree-ah-lee] was punished for defiling Athena's temple with Poseidon, and her face was pressed into Athena's (\*)** Aegis [ee-jiss] shield. Perseus used another shield as a mirror to help avoid this woman's petrifying gaze. For 10 points, name this gorgon, who turned humans to stone with her terrifying face and snake hair.

Answer: **Medusa**

<RMPSS, MYTH>

**These entities occupy a belt extending nine degrees on either side of the ecliptic and, because of precession, Ophiuchus [oh-FYE-ah-kus] should count as one of them. Bright stars within these objects include Aldebaran, Spica, and Pollux, while (\*)** fifteen stars make up the largest example, Virgo. For 10 points, name this collection of twelve constellations, including Taurus, Scorpio, and Pisces, that mark divisions along the Sun's path across the sky and are used for horoscopes.

Answer: **zodiac**al constellations (prompt on "constellations" before it is read; prompt on "zodiac signs")

<SCI, OTHER>

**This man's donation to the American Baptist Education Society led to the founding of the University of Chicago. This man's "Pittsburgh Plan" was criticized by Ida Tarbell, and that plan led to the formation of the National (\*)** Refineries Association. After losing a court case against New Jersey, a company owned by this man was broken up under the Sherman Antitrust Act. For 10 points, name this American industrialist who founded Standard 0il.

Answer: John D(avidson) **Rockefeller** Sr.

<HIST, AMER>

**This artist painted a muddled gray portrait of his wife, Camille, on her deathbed, and painted her holding a parasol in a field in Argenteuil [ahr-zhon-TWEE]. He created a series of paintings of haystacks, and of an arched green (\*)** bridge in his garden in Giverny [zhee-vayr-NEE]. He depicted shadowy boats and a low, orange sun over a harbor in a work that named the Impressionist movement. The painter of *Waterlilies* is, for 10 points, what French creator of *lmpression, Sunrise*?

Answer: (0scar-)Claude **Monet**

<FA, VISUAL>

**This man orchestrated a war with Denmark over Schleswig-Holstein, and in another incident, this man provoked France into declaring war by editing the Ems Dispatch. In the resulting conflict, this man's country seized (\*)** Alsace-Lorraine. This man argued for higher military budgets, stating that the "great questions of the time" would be answered with "blood and iron." For 1O points, name this man who helped Wilhelm I unite Germany as the "Iron Chancellor."

Answer: Otto Eduard Leopold, Prince of **Bismarck**, Duke of Lauenburg (accept Otto von **Bismarck**)

<HIST, EURO>

**The bookshelves of this work's protagonist include the *Vigiliae Mortuorum* of a "forgotten church," and the protagonist plays "The Haunted Palace" on his guitar for this story's narrator. The narrator hears the shriek of a dragon while reading a story to (\*)** Roderick, but the sound turns out to be Madeline, who escapes from her tomb to die with her brother in this story. For 1O points, name this short story by Poe in which the title "House" crumbles.

Answer: The **Fall of the House of Usher**

<LIT, AMER>

**By passing through this waterway at the Camarinal Sill, the Zanclean Flood ended a salinity crisis. Jebel Musa, just west of Ceuta [thay-oo-tah], is thought to be one of the "Pillars of (\*)** Hercules" on the southern side of this waterway. A proposed tunnel connecting Spain and Morocco would travel under, for ten points, what strait that connects the Atlantic Ocean and Mediterranean Sea?

Answer: Strait of **Gibraltar**

<GEO, GEO>

**Systems with this property are modeled in a lattice of plus one and minus one spin states. This subject of the Ising model emerges when Weiss domains are aligned, but disappears above the Curie temperature. Due to (\*)** hysteresis, this property remains even after the device that induced it is removed, and this is the mechanism that allows hard drives to store memory. For 1O points, name this strongest type of magnetism, that

is present in iron.

Answer: **ferromagnet**ism (accept **ferrous** magnetism; accept **antiferromagnet**ism until "Weiss" is read; prompt on "magnet" or "magnetism")

<SCI, PHYS>

**This band sang "Where you are seems to be / as far as an eternity" in "Sweetest Goodbye;" that song ended the debut album of this successor band to Kara's Flowers. Jesse Carmichael's 2015 meeting with the Dalai Lama forced this band to (\*)** cancel Chinese concerts, where they probably would have played "This Love" and "Payphone." For 1O points, name this band which keeps premiering singles on NBC's The Voice, on which its frontman, Adam Levine, is a judge.

Answer: **Maroon 5**

<TRASH, POP CULT>

**This author wrote about Trigorin and Nina in one play, and about Serebryakov's attempted murder at the hands of the title character in another. In another play by this man, Madame Ranevski sells the title (\*)** location to Lopakhin. A dramatic foreshadowing device is called this man's "gun." *Three Sisters* and *The Seagull* are by, for 1O points, what Russian playwright, who wrote *Uncle Vanya* and *The Cherry Orchard*? Answer: Anton Pavlovich **Chekhov**

<LIT, EURO>

**Release of this substance from Lake Nyos in 1986 killed many in Cameroon. The Keeling curve uses observations from Mauna Loa to plot the level of this, and an influx of this compound has significantly contributed to (\*)** coral bleaching and ocean acidification. Its concentration in Earth's atmosphere recently hit 4OO parts per million, and humans add more by burning fossil fuels. For 1O points, name this greenhouse gas with formula CO2.

Answer: **carbon dioxide** (accept **CO2** until mentioned)

<SCI, OTHER>

**This city was home to William Lloyd Garrison's *The Liberator*, and during one event in this city, Thomas Preston relieved Hugh White from guarding a customs house. An engraving depicting an action in this city shows the death of (\*)** Crispus Attucks. In another event in this city, Griffin's Wharf was stormed by the Sons of Liberty, who threw chests into the harbor. For 1O points, what Massachusetts city dealt with both a namesake massacre and a tea party.

Answer: **Boston**, Massachusetts

<HIST, AMER>

**Each of these structures has a different angular momentum described by its azimuthal quantum number. One variety of this concept is dumbbell- shaped as it has two lobes, while the lowest configuration of these objects are (\*)** spherical. The plum pudding model preceded the atomic model of this structure. For 1O points, name these electron-housing probability regions which come in s, p, d and f varieties.

Answer: **orbital**s

<SCI, CHEM>

1O. **In one of this man's self-portraits, a bronze fireman's helmet sits atop an easel, and he showed himself painting *The Soda Jerk* in another. He painted men in arm bands escorting a young black girl to (\*)** school in *The Problem We All Live With*, and showed a man in a plaid shirt standing to talk during a town meeting in

his *Freedom of Speech*, an entry in the *Four Freedoms* series he painted for *The Saturday Evening Post*. For 1O points, name this painter of American scenes.

Answer: Norman Perceval **Rockwell**

<FA, VISUAL>

**This novel's protagonist tricks Moely and runs away with Xury after being enslaved in Salee, and he teaches a pair of cats to eat dinner with him. Another character believes in Benamuckee, and lives on an island near the (\*)** Orinoco River in this book. This novel was inspired by Alexander Selkirk. An ex-cannibal named Friday and a man who is marooned for twenty-eight years are rescued in, for 1O points, what novel by Daniel Defoe about a title shipwrecked sailor?

Answer: The Life and (Strange Surprizing) Adventures of **Robinson Crusoe** (of York, Mariner: Who lived Eight and Twenty Years, all alone in an uninhabited Island on the Coast of America, near the Mouth of the Great River of Oroonoque; Having been cast on Shore by Shipwreck, wherein all the Men perished but himself. With An Account how he was at last as strangely deliver'd by Pyrates)

<LIT, BRIT>

**This god questioned Alvis until he turned into stone, to prevent Alvis from marrying this god's daughter, Thrud. This god failed to lift a cat because it was the serpent Jormungandr [YOR-mun-gon-dur] in disguise. This god is the husband of Sif, and (\*)** Loki helped this god disguise himself as Freyja to recover his signature weapon. This god was the son of Odin and wielded the short-handled hammer Mjolnir [mee-YOLL-neer]. For 1O points, name this Norse god of thunder.

Answer: **Thor** (accept **Donar**)

<RMPSS, MYTH>

**One politician with this surname was responsible for the construction of the Erie Canal, a move labeled that man's "ditch." Another politician with this surname was impeached by the House of Representatives for perjury regarding an (\*)** intern, but was not convicted by the Senate; that man was criticized for his signing of NAFTA as well as for the Monica Lewinsky scandal. For 1O points, name this surname shared by Dewitt and the 42nd U.S. President, Bill.

Answer: **Clinton** (accept Dewitt **Clinton**; accept William Jefferson **Clinton**)

<HIST, AMER>

**This philosopher praised Brutus in a book written about the Roman history book *Ab Urbe Condita*, his *Discourses on Livy*. In another work, he uses Cesare Borgia as an example of the title figure, who he said should be both a "lion" and a "fox" when (\*)** ruling. After being tortured by the Medicis, this man wrote that

"it is better to be feared than loved" as a ruler. For 1O points, identify this Italian philosopher who wrote *The Prince*.

Answer: Niccolo di Bernardo dei **Machiavelli**

<RMPSS, SOC SCI>

**This character and his wife Hedwige hear the "call to the cows," which re-appears at the end of the opera. He sings a horrified aria when Gessler ties this man's son to a stake; that aria, "Sois immobile" [swaz ee-MOH-bee-lay] tells Jemmy to "stay perfectly still." This (\*)** Swiss folk hero is immortalized in a Rossini opera whose overture is often used as backing music for heroic horseback riding. For 1O points, name this archer who shoots an apple from his son's head.

Answer: **William Tell** (accept **Guillaume Tell**; accept **Guglielmo Tell**; accept either underlined name in any of these answers)

<LIT, EURO>

**In one play by this man, Chris proposes to Ann Deever, the former girlfriend of his missing brother Larry, and discovers that his father, Joe Keller, had knowingly sold faulty airplane parts. That play is *All My Sons*. (\*)** Giles Corey is crushed to death in this man's play about the Salem witch trials, and "attention must be paid" to Willy Loman in another work by this man. For 1O points, name this American playwright of *The Crucible* and *Death of a Salesman*.

Answer: Arthur Asher **Miller**

<LIT, AMER>

**The union of a function and its reflection over this line cannot be a function. This line represents the real numbers in the Argand diagram of the complex plane, and the distance from this line is designated by the (\*)** ordinate. The graph of a quadratic function with imaginary roots will never touch this line, which marks the boundary between the first and fourth quadrants in a Cartesian graph. For 1O points, name this horizontal line, given as y equals zero.

Answer: **x axis** (accept ***y* equals 0** or equivalents until it is read)

<SCI, OTHER>

**The Michelis-Menten model explains how quickly these molecules can function. This class of molecules may use cofactors to trigger activity. These compounds can adapt to the active site in the induced fit model. These (\*)** macromolecules are not used up in reactions, but serve to reduce activation energy as biological catalysts. Ending with the suffix "-ase" [ACE], for 1O points, what type of proteins speed up chemical reactions?

Answer: **enzyme**

<SCI, BIO>

**This man attempted to gain aid from Great Britain in his "Letter from Jamaica," and he authorized the killing of Spanish civilians in his "Decree of War to the Death." This man detailed the fall of Venezuela's First Republic in his (\*)** Cartagena [kar-tah-HAY-nah] Manifesto, and met Jose de San Martin at the Guayaquil ["guy"-ah-kwill] Conference. For 1O points, name this man known as "The Liberator," who names a South American country that contains Lima.

Answer: Simon Jose Antonio de la Santisima **Bolivar** (prompt on "El Libertador" or "The Liberator" before it is read)

<HIST, WORLD>

2O. **One of these men gave Michael Ramsey his Ring of the Fisherman, and this group was charged with "binding" and "loosing" and the Power of the Keys. Sede vacante [say-day vah-kon-tay] occurs when one of these figures is not in power. One of these men issued the (\*)** Exsurge Domine [ek-soor-jay doh-mee-nay], which threatened Martin Luther with excommunication. The first of these was the Apostle Peter, and the current one is Francis. For 1O points, name the leader of the Catholic church.

Answer: **Pope**s (accept **Bishop**s **of Rome**; accept **Roman Pontiff**s; accept **Pontifex Maximus**; prompt on "His Holiness," "Holy Father," or "Sancta Papa")

<HIST, EURO>

**The BOOMERanG experiment supports one entity described by this adjective, which implies a non-zero value of the cosmological constant. Jan Oort and Fritz Zwicky proposed another substance with this adjective to account for the fast rotation of galaxies. Ninety-five percent of the (\*)** mass and energy in the universe has this property. For 10 points, name this word that signifies things that don't absorb electromagnetism, preventing them from being bright.

Answer: **dark**

<SCI, OTHER>

**After the defeat of Nazi Germany, this man suggested attacking the Soviet Union in what became known as "Operation Unthinkable." While in Missouri, this man gave his "Sinews of Peace" speech, in which he coined the term (\*)** "Tron Curtain" to denote areas dominated by Soviet influence, and in an address to parliament this man stated he had nothing else to give but "blood, toil, tears, and sweat." For 10 points, name this man who succeeded Neville Chamberlain as Prime Minister of the United Kingdom.

Answer: Sir Winston Leonard Spencer-**Churchill**

<HIST, EURO>

**A Chinese cult named for a "White" one of these objects predicted the coming of the Maitreya [mah-ee-tray-ah], and blue versions of these objects represented the sun in ancient Egypt, since they appeared during the day. This flower names Mahayana's most important (\*)** sutra, as well as a meditation position in Buddhism, whose Eightfold Path is represented by this flower's eight petals. For 10 points, name

this sacred water flower similar to a water lily.

Answer: sacred **lotus** (accept **padma**; accept **water lily** or **nymphaea** before "sutra" is read, as the Egyptian blue lotus is technically a water lily; prompt on "flower" before it is read)

<RMPSS, REL>

**This man sculpted *John the Baptist Preaching* to a larger-than-life scale to quell rumors that he used a living model to sculpt his work *The Age of Bronze*. This creator of *The Burghers of Calais* sculpted intertwined figures in *The* (\*)** *Kiss*, which he created to accompany his statue of a thoughtful Dante seated with his head on his hand, a part of this man's *Gates of Hell*. For 10 points, name this French artist, who sculpted *The Thinker*.

Answer: (Fran;;ois) Auguste (Rene) **Rodin**

<FA, OTHER>

**One member of this kingdom found at the Chernobyl site can convert radiation into usable energy, and the popular model organism *Saccharomyces cerevisiae* [sack-ah-roh-MY-seez sir-ah-VIS-ee-ay] also belongs to this kingdom. Members of this kingdom have bodies made from (\*)** hyphae [HTGH-fee], reproduce via spores, and have cell walls that contain chitin [KYE-tin]. Decomposers such as molds are members of, for 10 points, which kingdom of organisms that also includes yeasts and mushrooms?

Answer: **fungus** (accept **Fungi**)

<SCI, BIO>

**This character narrates a novel in which he helps investigate Jake and Jubiter Dunlap, and another novel in which he flies to Africa in a hot air balloon. This character comes between the Shepherdsons and Grangerfords in one novel, in which he meets the (\*)** Duke and the Dauphin. This boy runs away from the Widow Douglas by rafting down the Mississippi River with a former slave, Jim. For 10 points, name this character created by Mark Twain, a friend of Tom Sawyer.

Answer: **Huck**leberry **Finn**

<LIT, AMER>

***Browder v. Gayle* ruled against this state's segregation laws, and the Anniston police looked the other way while the Ku Klux Klan attacked the Freedom Riders in this state. National City Lines was boycotted in this state's capital after the removal of a (\*)** black woman from one of their buses. For 10 points, name this state in which Rosa Parks was removed from a Montgomery Bus and Martin Luther King Jr. wrote his "Letter from Birmingham Jail."

Answer: **Alabama**

<HIST, AMER>

**This value is the real part of all known non-trivial zeroes of the Riemann zeta function. Expressed in octal as 0.4, this is the reduced result of dividing the radius of a circle by the diameter. When this is used as an exponent, it is equivalent to taking the (\*)** square root. For ten points, name this fraction, which is multiplied by width and height in the formula for area of a triangle and is equal to 0.4999, with the nine repeating.

Answer: one-**half** (accept equivalents like **point five** or **one over two**)

<SCI, OTHER>

**People in this country eat buuz dumplings on Tsagaan Sar, New Year's Day. This country honored its adoption of Communism by renaming its capital "Red Hero." Nomads in this modern-day country have lived in gers, round (\*)** yurt-like tents, since well before the reign of this nation's Genghis Khan. For 10 points, name this country with capital Ulaanbaatar, which is landlocked by China and Russia.

Answer: Blue **Mongolia** (accept **Mongol Uls**; accept **Monkh kohkh teneriin oron**; accept **Khokh Mongol**; accept descriptive answers similar to **Land of Blue Sky**; prompt on "Land of the Horse" or similar answers)

<GEO, GEO>

**The protagonist of this work loses his taste for milk and becomes upset when his mother and sister attempt to remove a portrait of a woman in a fur hat from his room; later, he interrupts a violin performance given by his sister, (\*)** Grete [gray-tuh]. This work's protagonist is paralyzed when his father throws an apple that lodges in his carapace. Gregor Samsa transforms into a giant insect in, for 10 points, what novella by Franz Kafka?

Answer: The **Metamorphosis** (accept Die **Verwandlung**; do not accept Metamorphoses)

<LIT, EURO>

**After winning the Battle of Gaugamela [gow-gah-MAY-lah], this man's rival was killed by Bessus, and following the death of this man, his empire was split into factions by the Diadochi. This man dedicated a city in honor of his horse (\*)** Bucephalus after the animal died at the Battle of the Hydaspes ["high"-DAS-peez]. This man won the Battle of Tssus against Darius TTT, conquering Persia as a result. For 10 points, name this son of Philip TT, a Macedonian conqueror.

Answer: **Alexander the Great** (accept **Alexander III** of Macedon; prompt on "Alexander")

<HIST, EURO>

**An equation named for this man describes the mean anomaly using the eccentric anomaly and eccentricity, and he described the "music of the spheres" in his *Harmonices Mundi*. He determined that equal areas are covered in equal amounts of time by a line between a (\*)** planet and the Sun, and that all orbits are ellipses. For 10 points, name this astronomer who worked for Tycho Brahe and formulated three laws

of planetary motion. Answer: Johannes **Kepler**

<SCI, PHYS>

**This man entered a press conference singing "Zip-a-dee-doo-dah" one day after an emotional meeting with Pope Francis. He averted a government shutdown by passing a continuing resolution that did not defund (\*)** Planned Parenthood, shortly after announcing his planned resignation. For 10 points, name this Ohio representative, who was replaced by Paul Ryan as Speaker of the House in October 2015.

Answer: John Andrew **Boehner**

<CE, CE>

**A worker in this play claims to build stronger structures than a mason, shipwright, or carpenter, and a mother in this play drinks poison prepared by Laertes and her husband. This play's title character calls (\*)** Polonius a fishmonger after his father accuses Claudius of murder, and he mourns Ophelia after questioning whether it is better "to be or not to be." For 10 points, name this Shakespeare play about the title prince of Denmark.

Answer: The Tragedy of **Hamlet**, Prince of Denmark

<LIT, BRIT>

**A CollegeHumor parody of this song notes "in social class we're still on top" due to the status of those at Downton Abbey. This song's music video begins with a woman in pink heels and a fur coat walking down the street, and stars a man rocking a (\*)** white fedora and salmon suit. That singer repeats "girls hit your hallelujah" before challenging, "don't believe me just watch." For 10 points, name this Mark Ronson hit featuring Bruno Mars, who describes the title groovy district.

Answer: **Uptown Funk**

<TRASH, POP CULT>

**This god transformed Hyacinth into a flower and was the father of Asclepius, the god of healing. With his sister, this god killed Niobe's children after she insulted this god's mother. He was rejected by the nymph Daphne, and he was the son of (\*)** Leto and Zeus. This god created the first lyre, and is sometimes called Phoebus in reference to his association with light. For 10 points, name this twin of Artemis, the Greek god of prophecy and music.

Answer: Phoebus **Apollo** (accept **Apollon**)

<RMPSS, MYTH>

**In two works by this author, Leo attempts to build a Happiness Machine and an automated house functions after its inhabitants are vaporized. Douglas Spaulding's grandmother makes the title (\*)** *Dandelion Wine* in one work by this author of *The Martian Chronicles*, who wrote about a man who works for Captain Beatty as a fireman who burns books. For 10 points, name this author who wrote about Guy Montag in Fahrenheit 451.

Answer: Ray Douglas **Bradbury**

<LIT, AMER>

**A proposed amendment for this agreement would have freed slaves "at the age of twenty-five" and was named for James Tallmadge. Although it was already effectively repealed, this agreement was declared unconstitutional in the (\*)** Dred Scott case, and under this agreement Maine was admitted to the union. For 10 points, name this agreement, which established a line along the northern boundary of a namesake slave state. Answer: **Missouri Compromise** (accept **Compromise of 1820**)

<HIST, AMER>

**This composer wrote a challenging piano sonata for Count Waldstein and used five alternating pianissimo E and D-sharp notes to open a bagatelle in A minor. One of this composer's piano sonatas has a "quasi una fantasia" theme, representing a (\*)** reflection off Lake Lucerne. For 10 points, name this composer of "Fur Elise" and the *Moonlight Sonata*, a German composer who was deaf when he composed his ninth and final symphony.

Answer: Ludvig van **Beethoven**

<FA, AUDIO>

**The production of substances with this property is predicted by Zaitsev's rule, and sulfur has this interaction in a thial group. Oxygen forms one of these with carbon in carbonyls, as seen in acetone and formaldehyde. (\*)** Alkenes are defined by having this structure, represented in Lewis diagrams by an equals sign. For 10 points, name this type of covalent bond that requires four valence electrons, and that is stronger than a single bond.

Answer: **double bond**ing (accept **carbon-carbon double bond** until "thial" is read; prompt on "bond;" until "thial")

<SCI, CHEM>

**After the death of this man, his son Ellac was killed at the Battle of Nedao. This ruler clashed with Theodoric I and Aetius at the Catalaunian Plains, and this ruler may have died from a nosebleed after marrying Ildico. (\*)** Leo I convinced this brother of Bleda to cease his invasion of Italy, which started after Honoria sent this man her ring. For 10 points, name this loser at Chalons, a "Scourge of God" who led the Huns. Answer: **Attila** the Hun

<HIST, WORLD>

**One of this composer's works includes tubular bells during the break strain. Another of his works counters trombones and tubas with a trio featuring piccolos, and was honored by Congress in 1987. His (\*)** "Washington Post" earned this director of the US Marine Band the nickname the "March King." For 10 points, name composer of the "Liberty Bell," whose "The Stars and Stripes Forever" is America's National March. Answer: John Philip **Sousa**

<FA, AUDIO>

**IGCC primarily uses this mineral to produce syngas, and it was mostly produced in the Mississippian and Pennsylvanian periods. Release of sulfur from this mineral is a key cause of acid rain, and its rank goes from (\*)** lignite to anthracite. Often extracted by removing mountain tops, for 10 points, name this sedimentary rock made of fossilized carbon that is mined throughout the Appalachians.

Answer: **coal** (accept specific forms such as **anthracite** or **lignite** until their names are read)

<SCI, OTHER>

**This scientist examined exhaustion and confusion as possible causes of transmarginal inhibition. He won a Nobel prize in medicine for his work regarding animal digestive systems. BF Skinner's "operant conditioning" is often contrasted with this scientist's namesake (\*)** conditioning, also called "classical conditioning." For 10 points, name this Russian psychologist who examined dog's salivation in response to stimuli such as the ringing of a bell.

Answer: Ivan Petrovich **Pavlov**

<SCI, OTHER>

**This man ordered the construction of a war memorial named Valley of the Fallen. After the death of Jose Sanjurjo, this man became the sole leader of rebel forces. During the Rif War, this military officer led his country's (\*)** "Foreigners Brigade," and in another conflict, forces under this man were supported by the Condor Legion. For 10 points, name this general who ordered the bombing of Guernica, a dictator of Spain who ruled until 1975.

Answer: Francisco **Franco** Bahamonde

<HIST, EURO>

**This author wrote memoirs of her parents called *Fighting Angel* and *The Exile*. This author wrote a trilogy that includes *Sons* and *A House Divided*, and whose first book tells the story of the once-wealthy O-Lan and her husband, (\*)** Wang Lung. Life in a missionary family in China inspired, for 10 points, what American author of *The Good Earth*?

Answer: Pearl S(eidenstricker) **Buck**

<LIT, OTHER>

**This type of charge is always perceived in groups of two or three. The temperature of a black body can be determined by measuring this property with a spectroradiometer. In the subtractive model of this property, the (\*)** three primary types will cancel each other out, and light varies in this property from four hundred to seven hundred nanometers. For 10 points, name this property separated by prisms, that can be red, blue, or green.

Answer: **color**

<SCI, PHYS>

**This character decides to die in Colonus in one work. In another work, he was found as a baby on Kithairon with a "spike through his feet", and was raised by King Polybus of Corinth. In a play named for this man, (\*)** Creon describes how this father of Polynices ["polly"-nye-seez] and Antigone [an-TIH-guh-nee] answered the Sphinx's riddle, saving the city of Thebes. For 10 points, name this husband of Jocasta, who killed his father and married his mother.

Answer: **Oedipus**

<RMPSS, MYTH>

**Taiwo and Kehinde are names for these people in Yoruba culture, which builds Ibeji for deceased ones and considers these groups sacred. Figures with this relationship, named Hunahpu and Xbalanque, destroyed Xibalba [shee-BOL-bah]. The Dioscuri, whose names are (\*)** Castor and Pollux, have this relation and make up the constellation Gemini. A she-wolf suckled a pair of these children who founded Rome. For 10 points, name this familial relation between Mayan "Hero" ones and between Romulus and Remus.

Answer: **twin**s (prompt on broader answers, such as "siblings" or "brothers and sisters")

<RMPSS, MYTH>

**After being summoned in *Hearthstone*, Nat Pagle says he can wait while performing this action "all day." Using a Sonar Potion in *Terraria* provides a buff for this activity, and performing this action on the edges of the map has a chance to obtain the Reaver (\*)** Shark. In *The Sims 3,* this skill is enhanced by the Angler trait. Players can use an old rod to perform, for 10 points, what action, which can result in battles with Magikarp?

Answer: **fish**ing (accept **angling** until it is read; prompt on "angling" after it is read)

<TRAHS, POP CULT>

**Within this structure, one metabolic process begins by formation of acetyl-CoA from pyruvate and reduces NAD ["N-A-D plus"] to NADH. This structure has unique maternal DNA, suggesting an endosymbiotic origin. This organelle contains (\*)** cristae surrounding its matrix where the Krebs cycle is performed. For 10 points, name this organelle where the electron transport chain yields great amounts of ATP energy, the "powerhouse" of the cell.

Answer: **mitochondrion** (accept **mitochondria**)

<SCI, BIO>

**A controversial "Isleworth" version of this painting includes two flanking columns in the foreground. A sfumato view of a winding road provides the backdrop for this portrait, whose subject may be the wife of Francesco (\*)** Giocondo. The subject's hands are folded on the arm of her wooden chair; she wears a veil over her dark hair and has no visible eyebrows. For 10 points, name this painting by Leonardo da Vinci of a woman with a mysterious smile.

Answer: **Mona Lisa** (accept La **Gioconda** before "Giocondo" is read)

<FA, VISUAL>

**During this battle, Omar Bradley was detained after correctly stating that the capital of Illinois was Springfield. Joachim Peiper executed a group of American POWs during this battle's Malmedy Massacre. When asked to surrender during this battle, an American general defending (\*)** Bastogne responded "Nuts!" For 10 points, name this World War II battle named for the dent created in Allied lines.

Answer: **Battle of the Bulge** (accept Operation **Watch on the Rhine**; accept **Battle of the Ardennes** or **Ardennes Counteroffensive**; accept Unternehmen **Wacht am Rhein** or **Bataille des Ardennes**)

<HIST, EURO>

**The maximum number of roots with this property is equal to a polynomial's number of sign changes, according to Descartes' Rule. If a derivative has this property at a point, the function is (\*)** increasing at that point. The fundamental theorem of arithmetic implies that, other than one, all integers with this property are either primes or the products of prime numbers. The natural numbers all have, for 10 points, what property, sometimes denoted by a plus sign, indicating that they greater than zero?

Answer: **positive**

<SCI, OTHER>

**In a story in this collection, Absalon burns Nicholas's rear end after Nicholas woos Alison. In another story in this collection, one of King Arthur's knights is charged with discovering what women want.Two nuns and a pardoner are part of a group in the (\*)** Tabard Inn who hear the stories told by a Knight, a Miller, and the Wife of Bath. For 10 points, name this Middle English poem about travelers on their way to the title shrine.

Answer: The **Canterbury Tales**

<LIT, BRIT>

**This substance is used in the Shinto ritual Misogi, and the use of this substance in Islam is required after giving birth in the practice of Ghusl. In Hinduism, believers use this substance for purification by visiting the (\*)** Ganges. In Christianity, Moses drew this substance from a stone, and God used this substance to cleanse the earth during Noah's time. For 10 points, name this wet substance used to baptize Christians.

Answer: **water**

<RMPSS, MYTH>

**This city is home to the Po Lin Monastery and is connected to its airport on Chek Lap Kok Island by the Lantau Link, which includes the Tsing Ma Bridge. The Peak Tram is featured on this city's currency, which is more common in Macau than Macau's own currency. The Bank of (\*)** China Tower is in, for ten points, what city on Victoria Harbor, a Special Administrative Region of China that was a British colony until July 1997?

Answer: **Hong Kong**

<GEO, GEO>

**One example of these species, cobalt-60, is the major radiation source for cancer therapy. The extra mass in heavy water comes from deuterium, a hydrogen example of these atoms. Another example of these elements is denoted (\*)** "fourteen" and is used in carbon dating, and the atomic mass reported on a periodic table is a weighted average of these chemical variants. For 10 points, what is the name given to elements with the same number of protons but differing numbers of neutrons?

Answer: **isotope**s

<SCI, CHEM>

**In a novel by this man, Helen Ferguson criticizes the protagonist for having an affair with a nurse. Hitmen Max and Al target Ole Anderson in this author's "The Killers." This author of the Nick Adams stories created World War I ambulance driver (\*)** Frederic Henry, who falls in love with Catherine Barkley, in *A Farewell to Arms*, and wrote about a character who goes eighty-four days without catching a fish, Santiago

in a novella. For 10 points, name this author of *The Old Man and the Sea*. Answer: Ernest Miller **Hemingway**

<LIT, AMER>

**During this man's administration, America paid Tripoli $60,000 after the capture of the USS *Philadelphia*. Along with James Madison, this man authored the Kentucky and Virginia Resolutions, and this man banned exports from the United States with the (\*)** Embargo Act. After purchasing land from Napoleon, this inhabitant of Monticello ordered Lewis and Clark to explore the Louisiana Purchase. For 10 points, name the third President of the United States.

Answer: Thomas **Jefferson**

<HIST, AMER>

**Two boats are sailing beyond a half-illuminated railing in the background of this painting, which is an entry in the *Frieze of Life* series. The eruption of Krakatoa may have inspired the swirling red (\*)** sky in this painting, in which a pair of shadowy people walk along a hill overlooking a fjord. This work focuses on a bald figure holding his hands to his face while his mouth stretches open. For 10 points, name this painting by Norwegian artist Edvard Munch [moonk].

Answer: The **Scream** of Nature (accept **Skrik**; accept Der **Schrei** der Natur)

<FA, VISUAL>

**Twenty-five episodes of this show featured performances by Julia Collins, and this show was originally hosted by Art Fleming. The author of the book *Brainiac* and this show's top grossing champion, (\*)** Brad Rutter, were defeated by Watson, a computer, in 2011. Ken Jennings has the most wins on this game show, whose format includes three "daily doubles." For 10 points, name this quiz show hosted by Alex Trebek. Answer: **Jeopardy!**

<TRASH, POP CULT>

**This man declared he would "not accept if nominated" during the election of 1884, and after the Civil War, this man donated two cannons to the Louisiana Military Academy, an institution he had previously run. During one campaign, troops under this man created this man's (\*)** "neckties" out of railroads; that campaign ended with this man's capture of Savannah. For 10 points, name this general who led a march to the sea.

Answer: William Tecumseh **Sherman**

<HIST, AMER>

**In natural units, this quantity's square is the difference between the squares of energy and momentum. This property's units include electronvolts over c squared, and daltons. Objects with this property have (\*)** inertia and can interact with each other via gravity. This is the quotient of force and acceleration. For 10 points, name this quantity that is divided by volume to find density and is often measured in grams.

Answer: **mass** (accept **inertial** or **gravitational mass** until mentioned and prompt thereafter, accept **Planck mass**; do not accept or prompt weight)

<SCI, PHYS>

**In a novel by this author, Fleur-de-Lys [flure duh LEE] is frightened by Djali's ["jolly's] spelling trick. In another of this man's novels, Enjolras [on-zhol-RAH] leads the Friends of the ABC, who fight alongside Gavroche [ga-VROSH] and Marius. In novels about the misfortune of (\*)** Esmeralda and Fantine [fon-TEEN], this author wrote about a conflict between Frollo and Quasimodo [kwah-see-moh-doh] and one between Javert [jah-VA R] and Jean Valjean [jon val-J N]. For 10 points, name this French author of *e n ba o Notre Dame* and *Les Miserables* [lay mis-ay-RAHB].

Answer: Victor(-Marie) **Hugo**

<LIT, EURO>

**In this mountain range, accountant-turned-fugitive James "Bismarck" Hammes avoided capture by hiking for six years on a trail that extends from Springer Mountain to Mount Katahdin. Mount Mitchell is its highest peak, and this range includes the (\*)** Piedmont and Blue Ridge subranges in Virginia and North Carolina. For ten points, name this mountain range that impedes east-west travel as it extends from Georgia to Maine.

Answer: **Appalachian** Mountains

<GEO, GEO>

**The entropy of these entities is described by the Sackur-Tetrode equation, and another equation governing them is modified by the constants a and b, which represent attraction and volume of particles. The van der Waals equation modifies their (\*)** namesake law that is formed by combining Boyle's and Charles' laws. These are described by the equation P V equals N R T. For 10 points, name this "perfect" state of matter, in which molecules are spaced farther apart than in a liquid.

Answer: **ideal gas** (prompt on "gas")

<SCI, CHEM>

**This man allowed his navy to attack neutral ships in the Milan Decree, and that decree was a part of this man's Continental System which targeted Great Britain. Despite winning the Battle of (\*)** Borodino, this man was forced to retreat from Russia. This man was defeated at the Battle of Waterloo and, as a result, was exiled to St Helena. For 10 points, name this French emperor who engulfed Europe in his namesake wars. Answer: **Napoleon** Bonaparte (accept **Napoleon I**; do not accept Napoleon III)

<HIST, EURO>

**This creature once prolonged a singing contest by kicking down the sun when it tried to rise. It was tamed after Athena gave a golden bridle to one of Poseidon's sons. This creature was born after blood from Medusa's head fell into the sea. (\*)** Bellerophon died after this creature bucked when he attempted to fly this animal up Mount lympus. For 10 points, name this winged horse from Greek mythology.

Answer: **Pegasus**

<RMPSS, MYTH>

**In this author's first novel, Zeebo defends two children against Lula in First Purchase Church. In one of this author's works, Miss Maudie mocks Stephanie Crawford when she claims to have seen a man who leaves trinkets in a tree for (\*)** Jem and his sister. This author's recent second novel concerns the adult Jean Louise, who returns to Maycomb, Alabama to visit her father, Atticus Finch. For 10 points, name this author of *Go Set a Wat man* and *o Kill a Mo ingbird*.

Answer: (Nelle) Harper **Lee**

<LIT, AMER>

**When these groups form a cline that loops into itself, they are the "ring" type, and the competitive exclusion principle prevents two of these entities from occupying the same niche. The allopatric model led to different rodent forms of these entities on each side of the Grand Canyon, while different (\*)** beak shapes mark finch examples of these in the Galapagos. A population that can interbreed is, for 10 points, what taxonomic classification below the genus whose *Origin* was the subject of a Charles Darwin book.

Answer: **species**

<SCI, BIO>

**In response to the "axe murder incident," Operation Paul Bunyan was launched against this country. Three soldiers from this country attempted to assassinate Chun Doo-hwan in the Rangoon bombing. While fighting this country, UN forces landed at (\*)** Inchon but, after crossing the 38th parallel, were forced to retreat. For 10 points, name this country that is separated from its southern neighbor by a demilitarized zone and led by Kim Jong-un.

Answer: **North Korea** (accept **D**emocratic **P**eople's **R**epublic of **K**orea; accept **Choson** Minjujuui Inmin Konghwaguk; prompt on "Korea")

<HIST, WORLD>

**In this novel, Syme is an editor who disappears from work, and Mr Charrington struggles to remember the words to "Oranges and Lemons." O'Brien pretends to be in the Brotherhood in this novel, but is later revealed to be a member of the** (\*) Thought Police and sends Julia and Winston to be tortured in the Ministry of Love. For 10 points, name this George rwell novel about a dystopian society run by the mysterious Big Brother.

Answer: **Nineteen Eighty-Four**

<LIT< BRIT>

**In *Harris v McRae*, it was ruled that states with Medicaid were not required to pay for this action without federal reimbursement; that decision was strengthened by the Hyde Amendment, which prohibited government (\*)** funding for this action. In an attempt to perform this action, Norma McCorvey claimed she was raped before adopting a pseudonym and filing a lawsuit. For 10 points, name this action which was legalized

by *Roe v Wade*.

Answer: **abortion** (accept word forms; accept descriptions like "**terminating pregnancy**")

<HIST, AMER>

**Sergei Prokofiev's *Lieutenant Kije* suite opens with a soft trumpet, then a very soft entrance by this instrument with flute. This instrument plays the triplet-heavy rhythm in the ostinato backing to Ravel's (\*)** *Bolero*. This instrument has no pitch, but a strainer can tighten or loosen namesake wires inside it. For 10 points, name this type of drum, used with tom-toms and bass drums in a standard drum set.

Answer: **snare drum** (prompt on "drum")

<FA, AUDIO>

**The ESA satellite Hipparcos has been extremely successful at measuring this quantity, which can be estimated by observing Cepheid [SEH-fee-id] variables in the standard candle method. The apparent motion of nearby stars during Earth's revolution yields another type of this quantity called stellar (\*)** parallax. Barnard's Star has 1.8 parsecs of this quantity while the Sun has one astronomical unit of this as measured from Earth. For 10 points, name this quantity whose galactic unit, the light-year, is nearly 6 trillion miles.

Answer: **distance** (accept **stellar parallax** before "Cepheid" is read)

<SCI, PHYS>

**In 2015, Anthony Doerr's *All the Light We Cannot See* won this prize, for which Joyce Carol Oates was also nominated. Ernest Hemingway's *For Whom the Bell Tolls* controversially failed to win this prize after being deemed too offensive. Robert Frost, Eugene O'Neill, and Robert Sherwood share the record for the most of these (\*)** prizes in literature, with four each. For 10 points, name this American literary award, founded in 1917 by a newspaper magnate.

Answer: **Pulitzer** Prize for Fiction

<LIT, AMER>

**Proponents of this economist's theories argue against Say's law. Aggregate supply and aggregate demand are plotted on the x and y axis of his namesake "cross." This man criticized the Treaty of Versailles and argued against war reparations in *The* (\*)** *E onomi Conseq en es o t e Pea e*, and wrote

*e General eory o Employment*. His ideas are often contrasted with supply-side economics. For 10 points, name this British economist who supported stimulus spending.

Answer: John Maynard **Keynes**

<RMPSS, SOC SCI>

**It is impossible to inscribe more than one square in this type of triangle. The Pythagorean Theorem doesn't apply to these triangles, as c squared would be larger than (\*)** a squared plus b squared. The circumcenter lies outside this shape, and the cosine of one of these triangle's angles gives a negative value. For 10 points, name this type of triangle, so named because it features one angle larger than 90 degrees.

Answer: **obtuse** triangle (do not accept or prompt anything else)

<SCI, OTHER>

**This man blessed Ephraim before Manasseh and reprimanded his sons for killing the men of Shechem, who had kidnapped his daughter, Dinah. This man had a wrestling match at Peniel, and placed the children of his wife (\*)** Leah in front of Rachel when introducing his family to his brother, Esau. For 10 points, name this biblical father of twelve sons, including Levi and Joseph, whom God named Israel.

Answer: **Jacob** (accept **Ya'akov**; accept **Israel** or **Yisrael** before "Israel" is read)

<RMPSS, REL>

**After receiving one of these objects from Madagascar, Charles Darwin correctly predicted the existence of a moth with foot-long mouth parts. The parts of this structure can be divided into four whorls, including the corolla and (\*)** calyx. The female portion of this structure contains a style and stigma that may be fertilized

by cross-pollination thanks to animals like bees. Fruits and seeds are produced by, for 10 points, what reproductive organ of plants, that is often surrounded by colorful petals?

Answer: **flower**

<SCI, BIO>

**A 1922 publication of this song was printed with the phrase "special permission through courtesy of the Clayton F. Summy Corporation," which was mysteriously blurred in a 2015 court document. (\*)** Warner Music will no longer collect roughly two million dollars in annual royalties for this work, as the copyright on

this song's lyrics is now invalid. For 10 points, name this Patty and Mildred Hill song, usually sung at parties just before candles on a cake are blown out.

Answer: **Happy Birthday** To You

<FA, AUDIO>

**The case *Tinker v. Des Moines* ruled that students who protested this event by wearing black armbands could not be punished. A famous photograph captured Mary Ann Vecchio mourning a student who was shot by (\*)** National Guardsmen while protesting this conflict at Kent State University. Muhammad Ali refused to

be drafted to fight in, for 10 points, what controversial war, whose U.S. involvement ended with the fall of Saigon in 1975?

Answer: **Vietnam War** (accept **Second Indochina War**)

<HIST, WORLD>

**In an ancient Chinese story, this event happened when P'an Ku realized he no longer had to hold the sky away from the earth. In Japan, Izanami and Izanagi helped do this by dipping a sword into the almost (\*)** empty ocean. In a Greek myth, this event happened when Gaia gave birth to the sky, ,the ocean, and the land. For 10 points, name this mythological event, in which our planet came into being.

Answer: **creation of the world** (accept clear descriptions of the **world** coming into **being**; accept **earth** in place of "world;" prompt on "creation" alone)

<RMPSS, MYTH>

**This man's collected poems end by declaring "I hope to see my pilot face to face / When I have crost the bar." This poet depicted an "idle king" who resolves "To strive, to seek, to find, and not to yield." This man wrote a poem about the (\*)** Battle of Balaclava, in which men charge "half a league, half a league, half a league onward" and says"Into the valley of death / Rode the six hundred." For 10 points, name this British lord who wrote about the doomed "Charge of the Light Brigade."

Answer: Alfred, Lord **Tennyson**

<LIT, BRIT>

**The Feit-Thompson theorem proved that all finite groups with this type of order are solvable. Functions with this property can be written in the form "f of x plus f of negative x equals zero." No (\*)** perfect numbers have yet been discovered with this property. Functions with this property have rotational symmetry about the origin, and numbers with this property are congruent to one, modulo two. For 10 points, name this property that prevents a number from being divisible by two.

Answer: **odd**

<SCI, OTHER>

**This composer used an atonal seventh chord to open a D-flat major piano piece inspired by a Paul Verlaine poem. He mocked Wagner's *Tristan and Isolde* in the last piece from his *Children's Corner* suite, (\*)** "Golliwogg's Cakewalk". The third movement of this man's *Suite Bergamasque* was used for the iconic "Fountain" scene in the 2001 movie *Ocean's 11* and imitates moonlight. For 10 points, name this French Impressionist composer of "Clair de lune."

Answer: Claude **Debussy**

<FA, AUDIO>

**After throwing a bomb during this event, one man tried to drown himself in the Miljacka River, but failed due to cyanide-induced vomiting. A wrong turn by Leopold Lojka led to the success of this event, and during this event Duchess Sophie was killed. This attack was carried out by (\*)** Gavrilo Princip, a member of the Black Hand, who did so in Sarajevo. For 10 points, name this attack that caused the death of an archduke and led to World War I.

Answer: **Assassination** of Archduke Franz **Ferdinand**(accept obvious equivalents)

<HIST, EURO>

**This novel's narrator has a brother named DB who is a "prostitute" screenwriter in Hollywood, and he is beat up by Maurice for hiring, but only talking to, an actual prostitute named Sunny. This work's protagonist worries about the (\*)** ducks in Central Park and about his practical sister, Phoebe; that protagonist condemns phonies after being expelled from Pencey Prep in this book. For 10 points, name this novel about Holden Caulfield, written by JD Salinger.

Answer: The **Catcher in the Rye**

<LIT, AMER>

**This scientist erroneously proposed a triple helical structure for DNA. This man discovered the secondary protein structures of alpha helices and beta sheets, and identified defects in (\*)** hemoglobin as the cause of sickle cell anemia. Fluorine has a value of 4.0 on this man's scale of electronegativity. For 10 points, name this Caltech scientist who won Nobel prizes in both chemistry and peace.

Answer: Linus Carl **Pauling**

<SCI, CHEM>

**This team used the first overall pick in 1987 on "The Admiral", David Robinson. This team's summer league team won the 2015 Las Vegas under assistant coach Becky Hammon. In the offseason, they signed David West and Lamarcus Aldridge to join their roster that includes (\*)** Tony Parker, Kawhi Leonard, and Tim Duncan. For 10 points, name this Gregg Popovich-coached team that beat the Miami Heat in the 2014 NBA Finals.

Answer: **San Antonio Spurs** (accept either underlined portion)

<TRASH, SPORTS>

**Symbols in this faith include the KRC and ARC triangles, and Operating Thetan can be achieved after becoming Clear in this religion through the use of E-meters and auditing. "The Wall of Fire" in this religion is the hydrogen bombing of millions of people by galactic dictator (\*)** Xenu; that story was told by this religion's founder, science fiction author L Ron Hubbard. For 10 points, name this religion, whose adherents include John Travolta and Tom Cruise.

Answer: Church of **Scientology**

<RMPSS, REL>

**In this state, the Paxton Boys attacked Conestoga before marching on Germantown, and Light-Horse Harry Lee commanded troops while putting down the Whiskey Rebellion in this state. At one time, this state's Supreme Executive Council was led by (\*)** Benjamin Franklin. Slavery was abolished in this state in 1780, a move supported by its Quaker populace. The Declaration of Independence was signed in, for 10 points, what state's city of Philadelphia?

Answer: Commonwealth of **Pennsylvania**

<HIST, AMER>

**This work's protagonist sees a "violet-purple" glow near London, which turns out to be made by a "red weed" that is wiped out at the end of this novel. The protagonist of this novel encounters creatures with "v-shaped mouths" and large eyes, who kill Ogilvy with a (\*)** "Heat-Ray" and use tripod fighting machines to collect humans in this novel. Earth's bacteria destroy the Martian invaders in, for 10 points, what novel by HG Wells?

Answer: The **War of the Worlds**

<LIT, AMER>

**Francesco Carlini used these devices to determine the density of the Earth, and their Q factors equal mass times omega over the damping force. Their periods are nearly 2 pi times the square root of their lengths over (\*)** gravitational acceleration, but that approximation only holds at small angles. For 10 points, name these simple harmonic oscillators, masses suspended on strings that power grandfather clocks.

Answer: **pendulum**s (prompt on "simple harmonic oscillator" or "SHO" before it is read)

<SCI, PHYS>

**This civilization's language, Nahuatl, was recorded in the Florentine Codex. The "Massacre in the Great Temple" occurred in this civilization's capital, and this civilization's (\*)** Jaguar Warriors wielded swords with obsidian blades. This civilization made use of *chinampas* on Lake Texcoco, which was also home

to Tenochtitlan. For 10 points, name this Mesoamerican civilization who were led by Montezuma. Answer: **Aztec**s

<HIST, WORLD>

**A building in this city owned by Qatar is a pyramid nicknamed "the Shard," and this city is home to a large glass "Gherkin." A whispering gallery in this city was designed by Christopher Wren, and Monet painted the Houses of (\*)** Parliament in this city, which is home to the Albert Hall and a memorial to Horatio Nelson in Trafalgar Square. The Tower Bridge crosses the River Thames [temz] in, for 10 points, what capital city of England?

Answer: **London**, England, United Kingdom

<GEO, GEO>

**Examples of these animals have been found with bite marks from *Anomalocaris* and all types of this animal possessed compound eyes with calcite lenses. The nearest living relatives of these creatures are (\*)** horseshoe crabs. These creatures became the most common animals on Earth during the Cambrian explosion, but went extinct at the end of the Permian period. For 10 points, name this diverse group of fossil animals named for their three-lobed bodies.

Answer: **trilobite**s (accept **Trilobita**)

<SCI, BIO>

**This province's city of Gatineau [ga-tih-NOH] is part of its National Capital Region. This province forms the majority of the Labrador Peninsula. Its largest city, on an island in the confluence of the (\*)** Ottawa and St. Lawrence Rivers, hosted the opening ceremonies of the 1976 Summer Olympics in the Stade [stahd] Olympique. For ten points, name this French-speaking Canadian province, home to Montreal.

Answer: **Quebec**

<GEO, GEO>

**Toru Okada searches for one of these creatures in *The Wind-Up Bird Chronicle*, and one of these animals breaks a pickle dish in *Ethan Frome*. Okonkwo defeats a wrestler named for this animal in *Things Fall Apart*. In *Romeo and Juliet*, Tybalt is called the (\*)** "prince" of these animals, and Amy Tan wrote about

a "Chinese Siamese" one of these animals. For 10 points, name these animals which include a "Cheshire" one in *Alice in Wonderland*.

Answer: **cat**s (accept felis **cat**us or felis silvestris **cat**us; accept logical slang for cats, such as **kitty**; prompt on "feline")

<LIT, OTHER>

**In order to gain the support of Napoleon III, this country's first prime minister, the Count of Cavour, provoked a war with Austria. Forces from this country launched the Expedition of a Thousand in order to conquer the Kingdom of the Two (\*)** Sicilies; that attacked was commanded by Giuseppe Garibaldi. For 10 points, Victor Emmanuel TT became king of what country, with capital at Rome?

Answer: **Italy** (accept **Italian Republic**)

<HIST, EURO>

**One character in this work is attacked by dogs because Joseph believes that he stole a lantern. Another character in this novel raises Hareton to be illiterate as revenge for the childhood abuse he suffered from (\*)** Hindley. Nelly Dean narrates the events of this work to Mr. Lockwood, who has rented Thrushcross Grange. For 10 points, name this novel by Emily Bronte, in which Catherine and Heathcliff are finally buried together near the title house.

Answer: **Wuthering Heights**

<LIT, BRIT>

**This thinker's taped conversations with James Baldwin were the basis for *A Rap on Race*. This thinker examined Chambri female dominance in Papua New Guinea in *Sex and Temperament in Three Primitive Societies*. This thinker's "fateful hoaxing" titles a 1999 book by Derek Freeman, which discusses her examination of (\*)** adolescent sexuality on the island of Ta'u in Polynesia. For 10 points, name this American anthropologist who wrote *Coming of Age in Samoa*.

Answer: Margaret **Mead**

<RMPSS, SOC SCI>

**This brand paid tribute to its founding by issuing Johnson City Gold. Early packaging claimed that this product "tickled your innards" and featured the mascot Willy the (\*)** Hillbilly. Coconut water is found in this product's Kickstart line, and other variations include LiveWire and Baja Blast. For 10 points, name this lemon-lime Pepsi product that competes with Coke's Mello Yello.

Answer: Mountain **Dew**

<CE, CE>

**This author wrote of a character who was "more brave than me:more blond than you." That "conscientious object-or" had a "heart that recoiled at war." This man wrote the poem "maggie and milly and molly and may," which has almost no (\*)** capital letters, and described a man who "sang his didn't and danced his did." "anyone lived in a pretty how town" is by, for 10 points, what American poet known for his strange punctuation and capitalization?

Answer: E(dwin) E(stlin) **Cummings**

<LIT, AMER>

**A blue and yellow one of these objects appears in Rembrandt's *The Nightwatch* behind a girl in yellow, and Jasper Johns painted a "White" one of these. Delacroix painted a woman holding a three-colored one of these in (\*)** *Liberty Leading the People*, and a red-and-white striped one with a blue corner is held behind the title general in the patriotic *Washington Crossing the Delaware*. For 10 points, name these banners that sometimes represent a nation.

Answer: **flag**s

<FA, VISUAL>

**Coefficients for this phenomenon are calculated as ratios of tangents and sines in Fresnel's equations. One form of it produces evanescent waves, and occurs after the arcsine of the ratio of (\*)** refractive indices, also called the critical angle, is passed. Fiber optic cables use the "total internal" type of this phenomenon, and it can be "diffuse" or "specular." For 10 points, name this "returning" action of waves, which occurs on mirrors. Answer: **reflection** (accept total **internal reflection**)

<SCI, PHYS>

**This figure was delivered to Epimetheus after Zephyrus brought her to life, and this figure was responsible for trapping Elpis. She was taught to weave by Athena and how to speak by Hermes, and Hephaestus was responsible for creating this woman out of (\*)** clay. This woman was a gift from Zeus, who knew that this woman would fill the world with evil and misfortune. For 10 points, name this mythological woman who cursed mankind by opening a namesake box.

Answer: **Pandora**

<RMPSS, MYTH>

**This man claimed that "John Brown is no Republican" during a speech at Cooper Union, and he spoke out against the Kansas-Nebraska Act while in Peoria. This man had a series of debates with the creator of that act, (\*)** Stephen Douglass. During his run for Tllinois senator, this man argued against popular sovereignty, and claimed that "a house divided against itself cannot stand." For 10 points, name this president who gave the Gettysburg Address.

Answer: Abraham **Lincoln**

<HIST, AMER>

**According to Gibbs' phase rule, a pure substance at this point has zero degrees of freedom. Polymorphic substances, which exhibit multiple different solid forms, can have more than one of these points. Helium-4 has two of these points owing to its (\*)** superfluid behavior. For 10 points, name this point at which all three phases of a substance-solid, liquid, and gas-can exist in a state of thermodynamic equilibrium.

Answer: **triple point** (do not prompt or accept critical point)

<SCI, CHEM>

**In one of this author's novels, Kino and his family are plagued with bad luck after finding the title object, and he wrote another novel about the Trask family that mirrors the story of Cain and Abel. This author of *The Pearl* and (\*)** *East of Eden* wrote a novel in which George and Lennie dream of owning a ranch, and another about the Joad family, who move west during the Depression. For 10 points, name this author who wrote *Of Mice and Men* and *The Grapes of Wrath*.

Answer: John Ernst **Steinbeck**

<LIT, AMER>

**In bacteria, operons regulate the synthesis of a polycistronic type of this molecule, while a different type oversees the removal of introns and splicing of exons during transcription. One type of this molecule is cloverleaf-shaped, and carries (\*)** amino acids for translation. Tnstead of thymine, this molecule contains uracil. For 10 points, name this single-stranded molecule, which comes in "messenger" and "transfer" types, as opposed to DNA.

Answer: **RNA** or **ribonucleic acid**

<SCI, BIO>

**The Supreme Court's decision to support this legislation was called "The Switch in Time that Saved Nine," and companies showed support for part of this program by displaying blue eagles. This set of programs led to the creation of the (\*)** Tennessee Valley Authority and the construction of the Hoover Dam. For 10 points, name this series of economic programs, including the WPA and NRA, Franklin Roosevelt's attempt to end the Great Depression

Answer: The **New Deal**

<HIST, AMER>

**A play in this language concerns a man who enrolls in the Thinkery to erase his son's debts. A chorus of frogs sing "bre-ke-ke-kax, ko-ax, ko-ax" in another play in this language, which was used for *The Clouds* and *The Birds*, two works of (\*)** ancient comic theater. Writers in this language include Aristophanes and the author of *The Trojan Women*, Euripides. For 10 points, name this language used by Athenian playwrights. Answer: **Greek** (accept Ancient **Greek**; prompt on **Hellenic**)

<LIT, OTHER>

**Volcanic activity in this country's central Itasy and Ankaratra regions has turned the soil red. An endangered primate nicknamed the bandro in this country is threatened by deforestation of reed beds in Lake Alaotra. This nation's Betsiboka River flows westward toward the (\*)** Mozambique Channel. The lemur is endemic to, for ten points, what island in the The Indian Ocean, an African country with capital Antananarivo?

Answer: **Madagascar**

<GEO, GEO>

**A prophecy says that the subject of this event would "eat curds and honey" and be called "Wonderful Counselor." This event was foretold to the cousin of Elizabeth, and the subject of this event was honored at the Epiphany by the (\*)** Magi. This event occurred in a stable in Bethlehem in the presence of Joseph and a virgin who was conceived immaculately, Mary. For 10 points, name this religious event commemorated by Christmas.

Answer: **birth** of **Jesus** Christ (accept **nativity** of Jesus Christ; accept accept descriptions like **Jesus**'s **birth**day; accept **Christ**, the **Christ child**, or equivalents in place of "Jesus" in all listed answers; prompt on "Christmas" before it is read)

<RMPSS, REL>

**The two most common types of these objects are "stony" and "carbonaceous." Heinrich Olbers discovered two large examples of these objects that he called Pallas and Vesta, and a collision with one produced the (\*)** Chicxulub [cheek-SHA-loob] crater in the Yucatan. Platinum-rich ones are candidates for extraterrestrial mining. For 10 points, name these large rocks located in a namesake "belt" between Mars and Jupiter.

Answer: **asteroid**s (do not accept "comet")

<SCI, OTHER>

**A nuclear reactor in this country was targeted in Operation Opera. This country's "Chemical Ali" released mustard gas during the Al-Anfal campaign, and the United States' treatment of prisoners in this country led to the (\*)** Abu Ghraib scandal. This country was bombed during Operation Desert Storm, a move prompted by its invasion of Kuwait. For 10 points, name this country formerly led by Saddam Hussein from its capital, Baghdad.

Answer: Republic of **Iraq**

<HIST, WORLD>

**This language does not support multiple inheritance for classes or pointer arithmetic, and it uses a garbage collector to free unreachable memory. Android app development uses this language's syntax, leading to a lawsuit between Google and this language's patent owner, (\*)** Oracle. Tts original developer, Sun Microsystems, marketed this object-oriented language as "write once, run anywhere." For 10 points, name this computer programming language, named for a type of coffee.

Answer: **Java** (do not accept JavaScript)

<SCI, OTHER>

**A b-minor work with this quality includes a short score of a third-movement scherzo. An opera with this quality was edited by Franco Alfano, whose work was not preserved when Arturo Toscanini premiered it. Franz Sussmayr worked on another of these works, Mozart's (\*)** *Requiem* mass. Puccini's opera *Turandot* suffered from, for 10 points, what quality, which names Franz Schubert's eighth symphony, a work that was left with only has two movements?

Answer: works left **unfinished** by the composer (accept descriptions such as "**incomplete** musical works;" prompt on "symphonies," "eighth symphonies," or "symphonies by Franz Schubert" before "opera" is read; prompt on "works by Schubert" until "Franco Alfano" is read)

<FA, AUDIO>

Bonuses

This artist's work is divided into Blue, Rose, and African periods. For 10 points each,

[10] Name this twentieth-century Spanish painter of angular, geometric works like *Les Demoiselles d'Avignon* [lay day-mwah-ZELLS da-vee-NYON] and *Guernica* [gayr-nee-kah].

Answer: Pablo Ruiz y **Picasso**

[10] Picasso pioneered this geometric art movement with Georges Braque [zhorzh brok]. This movement focuses on combining multiple viewpoints of an object to create a single abstracted form.

Answer: **cubism** (accept word forms, such as **cubist**)

[10] Created during the Rose Period, this work shows Picasso's earliest leanings toward cubism. In this work, the title youth sits in front of a wall painted with flowers, wearing a garland of flowers on his head.

Answer: **Boy With a Pipe** (accept **Gar�on a la Pipe**)

<FA, VISUAL>

The feminist essay "A Room of One's Own" discusses the unequal opportunities of two people with this surname. For 10 points each,

[10] Give this surname. One person with this surname in "A Room of One's Own" is the real-life author of *Romeo and Juliet*; the other is his fictional sister, who dies in obscurity.

Answer: William and Judith **Shakespeare**

[10] "A Room of One's Own" is by this author, who wrote about the Ramsay family's journey to the title building in her novel *To the Lighthouse*.

Answer: (Adeline) Virginia (Stephen) **Woolf**

[10] In this other work by Virginia Woolf, Septimus Smith commits suicide and the title woman laments her marriage to Richard while preparing for a dinner party.

Answer: **Mrs Dalloway**

<LIT, BRIT>

This is the largest organ, as it surrounds the entire human body. For 10 points each,

[10] Name this soft covering which contains the epidermis, dermis, and the basement membrane that separates them. Melanin darkens its coloring, and exposure to UV rays can give this organ sunburn.

Answer: **skin**

[10] Skin contains this structural protein that gives tendons their elastic quality. Fibroblasts produce this triple-alpha helix protein, the most abundant polypeptide in mammals.

Answer: **collagen**

[10] Collagen's polypeptide sequence is a repeat of three amino acids, beginning with this smallest amino acid, which has a hydrogen as its side chain.

Answer: **glycine**

<SCI, BIO>

Gortyn is a major archaeological site for this civilization. For 10 points each,

[10] Name this civilization that wrote in Linear A and occupied the city of Knossos.

Answer: **Minoan** civilization

[10] The city of Knossos was located on this Greek island which was home to the Minoan civilization. During their wars with an Italian city, the Ottoman Empire conquered this island.

Answer: **Crete**

[10] Before being taken by the Ottomans, Crete was controlled by this Italian city. This city, which was ruled by a Doge, is known for its gondolas.

Answer: **Venice**

<HIST, EURO>

This character had a brief relationship with Amy Lawrence, and sees Injun Joe murder Dr Robinson. For 10 points each,

[10] Identify this character, who gets trapped in McDougal's Cave with Becky Thatcher. Answer: Thomas "**Tom**" **Sawyer** (accept either underlined name)

[10] This American author wrote *Tom Sawyer*, as well as a short story about Jim Smiley, "The Celebrated Jumping Frog of Calaveras County."

Answer: Mark **Twain** (accept Samuel Langhorne **Clemens**)

[10] Along with his half brother Sid, Tom lives with this woman and her daughter in St. Petersburg, Missouri. Tom convinces his friends to whitewash this character's fence.

Answer: Aunt **Polly**

<LIT, AMER>

An increase in sulfur dioxide and nitrogen dioxide in the atmosphere can cause this weather phenomenon. For 10 points each,

[10] Name this type of precipitation that causes metal corrosion and the erosion of stone statues, and has a low pH.

Answer: **acid rain** (accept **acid precipitation**; prompt on "acid" or "rain")

[10 ] Hourly pollution reports issued on Twitter by the US embassy in this country once described its air as "crazy bad." This Asian country's air pollution is a result of its many coal-burning factories and the second-highest number of cars in the world.

Answer: People's Republic of **China** (do not accept Republic of China)

[10] Both acid rain and smog may result from this controversial drilling technique that pumps water and chemicals into the ground to release natural gas and oil.

Answer: **hydraulic fracturing** (accept **hydrofracturing** or **hydrofracking**; accept **fracking**)

<MISC., MISC.>

The Straits of Mackinac [MAK-in-aw] connect two of these bodies of water called Michigan and Huron. For 10 points each,

[10] Name this chain of freshwater lakes found between the United States and Canada.

Answer: **Great Lakes**

[10] This Great Lake, named for a Canadian Province, is the smallest by surface area. The city of Toronto sits on the banks of this lake.

Answer: Lake **Ontario**

[10] This river is the outlet from the Great Lakes to the Atlantic Ocean. This river forms a natural border between the U.S. and Canada.

Answer: **St. Lawrence** River

<GEO, GEO>

This ship departed from Southampton in 1912. For 10 points each,

[10] Name this Olympic Class ocean liner which sank after hitting an iceberg on its maiden voyage.

Answer: RMS **Titanic**

[10] The *Titanic* was operated by this cruise line, whose flag featured their namesake celestial object. This cruise line later merged with their former competitor, Cunard Line.

Answer: **White Star** Line of Boston Packets (accept **Oceanic Steam Navigation Company**)

[10] Cunard Line built this cruise ship which was sunk off the coast of Ireland during World War I. Despite official statements saying otherwise, this ship was indeed carrying weapons.

Answer: RMS **Lusitania**

<HIST, EURO>

Being an early Christian was risky business. Identify these saints by their deaths, for 10 points each.

[10] This saint was imprisoned, beaten, and beheaded for providing marriages to Christian couples. This patron saint of love is commemorated on February 14.

Answer: Saint **Valentine** of Rome

[10] This saint, the namesake of an order of friars, was followed by Saint Clare and died from his stigmata after a long fast. This Italian is the patron saint of animals.

Answer: Saint **Francis** of Assisi

[10] This "doubting" Apostle was legendarily martyred in India, where he was impaled on a lance. Answer: Saint **Thomas** the Apostle (accept Doubting **Thomas**)

<HIST, OTHER>

The official definition of the meter is based on this constant. For 10 points each,

[10] Name this constant, symbolized *c*, that is the upper limit on the velocity of any object in the universe. Photons travel at this velocity.

Answer: **speed** of **light** in a vacuum

[10] The photon is able to move at the speed of light because it has this property, indicating that it would have no rest energy.

Answer: **massless** (accept descriptions like "it has **no mass**")

[10] This experiment disproved the "luminiferous aether" theory because, when this experiment's two namesake scientists adjusted their interferometer, the speed of light did not change.

Answer: **Michelson-Morley** experiment (accept any answer with the names Albert **Michelson** and Edward **Morley**)

<SCI, PHYS>

Okun's law states that GDP will decrease by two percent when this phenomenon increases by one percent. For 10 points each,

[10] Name this quantity that is the percentage of people who are looking for a job, but are unable to find one. Answer: **unemployment** rate (accept word forms like "**unemployed** people")

[10] Unemployment generally increases during these economic "downturns" that occur when GDP remains down for at least two fiscal quarters. In 2008, the United States experienced a major one of these.

Answer: **recession** (accept Great **Recession**; do not accept "depression")

[10] Unemployment is plotted on the X-axis of this curve. It displays an inverse relationship between unemployment and inflation.

Answer: **Phillips** Curve

<RMPSS, SOC SCI>

James Thurber wrote a collection of these stories *For Our Time*, including one about "The Unicorn in the Garden." For 10 points each,

[10] Give the term for a story in which anthropomorphic animals or other characters teach a moral lesson. Many of these stories were written by Aesop.

Answer: **fable**s

[10] Thurber adapted this Aesop fable, in which the title fast animal loses a race to a very slow creature because he stops to take a nap.

Answer: The **Tortoise and the Hare**

[10] Thurber also adapted another Aesop fable about two of these animals, who travel from the city to the country and vice-versa, only to discover they were each better off at home.

Answer: **mouse** (accept **mice**; accept The **Country Mouse** and the **City Mouse** or either underlined portion of that title; accept The **Mouse** Who Went to the Country)

<LIT, OTHER>

The Great Swamp Fight occurred in this colony which was also home to Samuel Slater's textile workshop. For 10 points each,

[10] Name this state, governed from Providence, which was home to the Narragansett Indians and the dissident Anne Hutchinson.

Answer: **Rhode Island** and Providence Plantations

[10] This author of *The Bloody Tenent of Persecution* founded Rhode Island to be a place of religious freedom.

Answer: Roger **Williams**

[10] Another colony founded for religious reasons was this Catholic safehaven, which was created by George Calvert, Lord of Baltimore.

Answer: **Maryland**

<HIST, AMER>

This god of law helped judge the worthiness of the dead by weighing the feather of Ma'at. For 10 points each,

[10] Name this Egyptian god of knowledge and magic who invented writing and mediated disputes between the gods.

Answer: **Thoth** (accept **Djehuty**; accept **Zehuti**; accept **Tetu**)

[10] Thoth weighed this body part of deceased Egyptians against the feather of Ma'at to determine whether they were worthy of entering the afterlife.

Answer: **heart**

[10] Thoth stood alongside Ra as he traveled on this kind of object, which represented the sun. Horus painted one of these objects to look like it was made out of stone to win a race.

Answer: **boat**s (accept equivalents like **ship**s)

<RMPSS, MYTH>

For 10 points each, name the following mathematical measurements that take into account the "weight" of the values.

[10] Adding all of the values in a set, then dividing by the total number of values, gives you the arithmetic type of this statistic.

Answer: arithmetic **mean** (accept **average**)

[10] In geometry, this point is the average location of all the points in a two-dimensional shape. If the shape has uniform density, this point is also the center of mass.

Answer: **centroid** (prompt on (geometric) center)

[10] In probability, the long-term average outcome of an experiment is called this. For example, this quantity for "rolling a fair six-sided die once" is three point five.

Answer: **E**xpected **V**alue (accept **expectation**; accept first **moment**)

<SCI, OTHER>

For 10 points each, answer the following about a poem that concerns a creature that is "burning bright / in the forests of the night."

[10] Name this poem about a title big cat, which asks "what immortal hand or eye / dare frame thy fearful symmetry?"

Answer: The **Tyger**

[10] This author wrote "The Tyger" as part of his *Songs of Experience*, and included a companion poem about a meeker creature in his *Songs of Innocence*.

Answer: William **Blake**

[10] This companion piece to "The Tyger" asks a creature with a "tender voice" and "softest clothing," "dost thou know who made thee?"

Answer: The **Lamb**

<LIT, BRIT>

The first version of this chart included empty spaces for undiscovered elements like eka-silicon and eka-germanium. For 10 points each,

[10] Name this arrangement that places elements with similar properties into columns by order of atomic number.

Answer: **periodic table** of elements

[10] This Russian scientist lends his name to element 101, and was notoriously snubbed by the Nobel Prize Committee even though he developed the periodic table.

Answer: Dmitri **Mendeleev**

[10] The first validation of Mendeleev's predictions was the 1875 discovery of this element, number 31. This metal is commonly used in semiconductors and has a melting point so low that it turns to liquid when held in the hand.

Answer: **gallium** (accept **Ga**)

<SCI, CHEM>

Characters in this ballet visit the Land of Snow and the Land of Sweets. For ten points each,

[10] Name this ballet in which Herr Drosselmeyer gives the title toy to Clara. It includes the mesmerizing "Dance of the Sugar Plum Fairy."

Answer: The **Nutcracker** (accept **Shchelkunchik**, balet-feyeriya; accept **Casse-Noisette**, ballet feerie)

[10] *The Nutcracker*'s score was composed by this man. Von Rothbart turns Odette into the title bird in this man's *Swan Lake*, and he commemorated the Battle of Borodino in his *1812 Overture.*

Answer: Pyotr Ilyich **Tchaikovsky**

[10] Tchaikovsky based this ballet on a Charles Perrault fairy tale. In this ballet, Carabosse curses King Florestan's daughter, but she is saved by Prince Desire.

Answer: The **Sleeping Beauty** (accept **Spyashchaya krasavitsa**)

<FA, AUDIO>

In the aftermath of one event in this city, a man was granted the title "Baron of Highfall." For 10 points each,

[10] Name this current capital of the Czech Republic, whose Second Defenestration led to a war between Catholic and Protestant coalitions.

Answer: **Prague**

[10] The Second Defenestration of Prague caused this temporally-named conflict, which included the Battle of White Mountain. This war began in 1618 and ended with the Peace of Westphalia in 1648.

Answer: The **Thirty Years'** War

[10] During the Thirty Years' War, the king of this Vasa-ruled country was killed during the Battle of Lutzen. After the death of that man, Gustavus Adolphus, he was succeeded by his daughter Christina as ruler of this nation.

Answer: Kingdom of **Sweden**

<HIST, EURO>

Phillis Wheatley wrote "'Twas mercy brought me from my pagan land" in a poem about "Being Brought From Africa To America." even though she had been kidnapped and forced into this barbaric way of life. For 10 points each,

[10] Name this outdated system, in which humans claimed to own other humans. Answer: **slavery** (accept word forms)

[10] Scarlett O'Hara persuades her father to buy the slave Dilcey and her daughter, Prissy, in this Civil War-era Margaret Mitchell novel, which ends when Rhett Butler leaves Scarlett.

Answer: **Gone with the Wind**

[10] In this Toni Morrison novel, Denver tries to help her mother, Sethe, as she deals with her remorse after having killed the title girl to save the child from a life of slavery.

Answer: **Beloved**

<LIT, AMER>

This composer set a collection of German folk poems to music in *Des Knaben Wunderhorn* and his own poetry to music in "Songs of a Wayfarer." For 10 points each,

[10] Name this German composer who wrote eight symphonies, then the symphony-sized *Song of the Earth*, then a ninth symphony, but left his tenth symphony unfinished.

Answer: Gustav **Mahler**

[10] Mahler's superstition regarding the "Curse of the Ninth" refers to the fact that, since this German composer's *Choral* ninth symphony, no composer had finished a 10th symphony.

Answer: Ludwig von **Beethoven**

[10] Mahler's primary occupation was conducting, rather than composing; he directed many of this German composer's operas, including *Tristan and Isolde*, *The Valkyries*, and *The Ring of the Nibelungs*.

Answer: Richard **Wagner**

<FA, AUDIO>

For 10 points each, answer the following about literary works that feature characters retreating from illness.

[10] Prince Prospero holds a colorful ball for nobles fleeing the title disease in "The Masque of the Red Death," a short story by this American author of "The Black Cat" and "The Cask of Amontillado" [ah-mon-tee-YAH-doh].

Answer: Edgar Allan **Poe**

[10] Thomas Mann's *The Magic Mountain* takes place in a Swiss sanitorium that treats patients with this lung disease, also called "consumption."

Answer: **tuberculosis** (accept **TB**)

[10] Ten young people tell each other stories after retreating to the country to escape the Black Death in this story collection written by Boccaccio [boh-KAH-chee-oh].

Answer: The **Decameron** (accept **Decamerone**)

<LIT, OTHER>

This religious leader's songs are part of the holy Avestas. For 10 points each,

[10] Name this Persian prophet, whose namesake religion venerates the creator god Ahura Mazda. Answer: **Zoroaster** (accept **Zarathustra**)

[10] In Zoroastrianism, Towers of Silence have traditionally been used to perform this funerary action. In Hinduism, this action is performed primarily by cremation.

Answer: **burial** (accept descriptions, such as "**burying** the **dead**" or "**disposing** of a **body**")

[10] Zoroastrians worship at temples named for this substance. Zoroastrianism calls this substance Atar and ranks it according to its heat and intensity.

Answer: **fire** (accept **flame**s)

<RMPSS, REL>

During this war, a road in Verdun became known as the "Sacred Way." For 10 points each,

[10] Name this war caused partly by the recent formation of the German Empire. During this war, Russia, Great Britain, and France formed the Triple Entente.

Answer: **World War I** (accept **First World War**)

[10] The bloodiest battle in World War I was this Douglas Haig-led battle that took place by a French river. This battle saw the first appearance of a tank and concluded with over one million casualties.

Answer: Battle of the **Somme** (accept **Somme** Offensive)

[10] America joined World War I in 1917 by sending this John Pershing-led army, which was composed of two million "doughboys."

Answer: **A**merican **E**xpeditionary **F**orce

<HIST, EURO>

It has been hypothesized that these entities can evaporate over time by emitting Hawking radiation. For 10 points each,

[10] Name these regions of space with a gravitational pull so strong that no particles or light can escape from inside them.

Answer: **black hole**s

[10] This term refers to the edge of a black hole, and marks the boundary past which observations cannot be made and escape from the black hole is impossible.

Answer: **event horizon**

[10] After crossing the event horizon, an object would become longer and thinner because of this stretching effect.

Answer: **spaghettification** (accept **noodle** effect)

<SCI, PHYS>

This character once mistook a giraffe bubble for an elephant, and he asked "What's the difference?" between stupid and Texas. For 10 points each,

[10] Identify this pink sea creature, who lives under a rock in Bikini Bottom. Answer: **Patrick Star** (accept either underlined name)

[10] This neighbor of Patrick Star works as a cook at the Krusty Krab. This title character lives in a pineapple with his snail Gary.

Answer: **Spongebob Squarepants** (accept either underlined name)

[10] This elderly superhero, a resident of Bikini Bottom, teams up with Barnacle Boy to face foes like Man Ray and the Dirty Bubble.

Answer: **Mermaid Man**

<TRASH, POP CULT>

Members of this tribe signed the Treaty of New Echota, and its first constitutionally elected chief was John Ross. For 10 points each,

[10] Name this Native American tribe whose syllabary was created by Sequoyah. During Indian Removal this tribe was forced to walk the Trail of Tears.

Answer: **Cherokee** Nation (accept **Tsalagi**)

[10] The Cherokee were removed despite the ruling of this 1832 court case. This court case, which was levied against Georgia, found that the state had no place in Native affairs.

Answer: **Worcester** v. Georgia

[10] In response to *Worcester v Georgia*, this seventh president apocryphally said "John Marshall has made his decision; now let him enforce it!"

Answer: Andrew **Jackson**

<HIST, AMER>

These disturbances can be longitudinal or transverse. For 10 points each,

[10] Name this type of motion, also called an oscillation. These have periods and frequencies that can be determined by graphing their crests and troughs.

Answer: **wave**s

[10] According to the principle of superposition, when the crest of one wave meets the trough of another wave of equal amplitude, the two cancel each other out by the destructive type of this phenomenon.

Answer: **interference**

[10] An interference pattern can result when a wave passes through a narrow slit and experiences this phenomenon, seen whenever a wave bends around the edge of an object. For optical waves, this process displays alternating fringes of light and dark.

Answer: **diffraction**

<SCI, PHYS>

Under this system, Trevor Noah's birth was a crime. For 10 points each,

[10] Name this South-African state of segregation that lasted from 1948 to 1994. Nelson Mandela fought to end this system and upon its repeal became President.

Answer: **Apartheid**

[10] During the Apartheid, an attempt to introduce this language into Soweto schools led to an uprising. Despite this language's widespread use in South Africa, English was still prefered.

Answer: **Afrikaans**

[10] After the end of the Apartheid, South Africa was readmitted to this group of former British territories. Answer: The **Commonwealth** of Nations

<HIST, WORLD>

The value of this quantity for a parabolic arch is two-thirds times the height of the arch times the base of the arch. For 10 points each,

[10] Name this two-dimensional measurement of the size of a shape. For a circle, it can be found by taking pi times the square of the radius.

Answer: **area**

[10] A three-dimensional figure does not have area; instead, this other measurement considers the total measure of the boundary points of the three-dimensional object.

Answer: **surface area**

[10] The area of a curved two-dimensional region can be found by using this method from calculus, the inverse operation of differentiation.

Answer: **integration** (accept word forms, such as **integral** or **integrate**)

<SCI, OTHER>

During the nineteenth-century Meiji [may-jee] Restoration, Japanese culture spread West to inspire the art and culture of Europe. For 10 points each,

[10] "Japonism" influenced the style of this French art movement that focused on studies of light and "plein air" [plen air] painting. This movement's painters included Manet and Mary Cassatt.

Answer: **Impressionism** (accept word forms, such as **Impressionist**)

[10] The Impressionists were greatly inspired by Japanese ukiyo-e [oo-kee-oh-ay]; ukiyo-e prints are produced by applying ink to interlocking blocks made of this material.

Answer: **wood**

[10] Wood block printing master Hokusai's [hoh-koo-"sigh" 's] work *The Great Wave Off Kanagawa* [kah-nah-gah-wah] is one of his *Thirty-Six Views* of this iconic Japanese volcano.

Answer: Mount **Fuji** (accept **Fuji**yama; accept **Fuji**-san or **Fuji**-sama)

<FA, VISUAL>

In this novel, Roger rolls a boulder onto a conch shell that had been used to call meetings. For 10 points each,

[10] Name this William Golding novel about a group of young boys, including the twins "Samneric" and the choirboy Jack, who are stranded on an island.

Answer: **Lord of the Flies**

[10] In *Lord of the Flies*, this chubby boy is killed by the boulder Roger rolls. This character's glasses are used to light signal fires.

Answer: **Piggy**

[10] At the end of *Lord of the Flies,* a Royal Navy officer shows up to save the boys. The officer is an example of this plot device, whose name means "god from the machine," in which a new character is introduced to solve a problem.

Answer: **deus ex machina**

<LIT, BRIT>

The Atlas Mountains are found on the northern edge of this desert. For 10 points each,

[10] Name this North African desert, the largest hot desert in the world.

Answer: **Sahara** Desert

[10] This region directly south of the Sahara Desert transitions the African continent between the Sahara and the savannah.

Answer: **Sahel**

[10] The Sahel stretches east to this body of water's shore on Sudan and Eritrea; crossing this body of water from there would take you to Saudi Arabia.

Answer: **Red Sea**

<GEO, GEO>

Carbon dioxide and water are needed for plants to undergo this process. For 10 points each,

[10] Name this process in which sunlight is converted into usable chemical energy by formation of sugars.

Answer: **photosynthesis**

[10] This dual-membrane organelle in plant cells is responsible for photosynthesis.

Answer: **chloroplast**

[10] Within the chloroplasts, these membrane structures form stacks called grana that house the light-dependent reactions of photosynthesis.

Answer: **thylakoid**s

<SCI, BIO>

Along with its associated satyr play, *Proteus*, the *Oresteia* [oh-reh-STY-ah] trilogy won a dramatic festival for the Greek playwright Aeschylus. For 10 points each,

[10] Name this Greek god, for whom the drama festival was named. This god governed divine inspiration, wine, and merrymaking.

Answer: **Dionysus** (accept **Dionysia** Festival; do not accept Bacchus)

[10] The first play in the *Oresteia* concerns the death of this title king, who sacrifices his daughter, Iphigenia [if-ih-jen-"EYE"-ah], and is killed by his wife Clytemnestra [kly-tem-NEH-stra] after he returns from the Trojan War with Cassandra.

Answer: **Agamemnon**

[10] Cassandra was given this ability by Apollo, but was cursed so that no one would listen to her. Answer: **prophecy** (accept equivalents, such as **see**ing the **future**)

<RMPSS, MYTH>

The busiest one of these locations in the United States is Hartsfield-Jackson Atlanta International. For 10 points each,

[10] Name these locations, such as O'Hare International. These locations often require extensive security checks before a traveller is allowed near a runway.

Answer: **airport**s

[10] The largest airport serving the Washington DC area is named for this former Secretary of State. While serving under Eisenhower, this man helped organize SEATO.

Answer: John Foster **Dulles**

[10] Pereira and Luckman designed this California airport's Theme Building, known for its two crossing arches. The third letter in this airport's code is meaningless.

Answer: **L**os **A**ngeles International Airport (or **LAX**)

<GEO, GEO>

A particular Greek goddess found herself in a lot of competitions. For 10 points each,

[10] Name this deity, who competed with Poseidon over control of her namesake city. She was the Greek goddess of wisdom.

Answer: **Athena** (do not accept "Minerva")

[10] Athena competed against other Olympian goddesses to be deemed the most beautiful in the eyes of this Trojan prince, who later kidnapped Helen.

Answer: **Paris**

[10] In one myth, Athena was challenged to a weaving contest by this mortal. After she lost, Athena transformed this woman into a spider.

Answer: **Arachne**

<RMPSS, MYTH>

These substances can be anodized, such as by galvanizing, in order to build a strong oxide layer around them. For 10 points each,

[10] Name these substances that have high electrical and thermal conductivities because valence electrons in these substances are entirely delocalized in a "sea of electrons."

Answer: **metal**s

[10] Metals are often malleable and have this property, the ability to be stretched into a thin wire. This property refers to a solid's ability to deform in response to tensile stress.

Answer: **ductility** (accept word forms, such as they are **ductile**)

[10] Metals cannot be ductile in this state of matter, as their atoms move too freely to form a rigid shape. This state of matter is achieved by melting solids or by condensing gases.

Answer: **liquid**

<SCI, CHEM>

This book opens by discussing the "spectre haunting Europe," and argues that the working class has "nothing to lose but their chains." For 10 points each,

[10] Name this political book that discusses the class struggle between the proletariat and bourgeoisie [bohr-jwah-zee], and calls on the working men of the world to unite.

Answer: The **Communist Manifesto** (accept **Manifesto of the Communist Party**)

[10] This German thinker collaborated on *The Communist Manifesto* with Friedrich Engels, and also wrote *Das Kapital*.

Answer: Karl **Marx**

[10] Friedrich Engels discussed the effects of industrialism on the working class in his 1845 book, *The Condition of the Working Class* of this country.

Answer: The Condition of the Working Class in **England** (accept **Britain**; accept **U**nited **K**ingdom)

<RMPSS, SOC SCI>

This phenomenon allows battleships to float even though steel is denser than water. For 10 points each,

[10] Name this upward-directed force experienced by an object immersed in a liquid that is equal to the weight of the fluid displaced.

Answer: **buoyancy** (accept **buoyant** force)

[10] This Greek mathematician's principle explains buoyancy, and he supposedly shouted "Eureka!" after realizing that water displacement could be used to prove a gold crown was fake. This man also established the law of the lever.

Answer: **Archimedes**

[10] The buoyant force can be used to float heavy objects because an increase in fluid pressure is exerted in all directions, a fact explained by this French mathematician's principle. This man used his principle to build the first hydraulic press.

Answer: Blaise **Pascal**

<SCI, PHYS>

Fortune tellers are forced to walk with their heads twisted backward for all eternity in this poem, in which unbaptized, virtuous people stay in a castle in Limbo. For 10 points each,

[10] Identify this first entry in Dante's *Divine Comedy*, in which Dante explores the Circles of Hell.

Answer: **Inferno**

[10] Dante is accompanied through Hell and part of Purgatory by this Roman poet, a resident of Limbo. This author of the *Aeneid* hands Dante off to the beautiful Beatrice as Dante approaches Heaven.

Answer: **Virgil**

[10] In the frigid ninth Circle of Hell, Dante and Virgil encounter Satan chewing on the legs of Cassius and Brutus, and on the head of this man.

Answer: **Judas** Iscariot

<LIT, EURO>

This largest internal organ produces bile that is used in digestion. For 10 points each,

[10] Name this organ that removes toxins such as alcohol from the bloodstream.

Answer: **liver**

[10] Type A, B, and C viral infections may cause this inflammation of the liver. In some cases, this disease is spread by sexual contact and can be prevented by vaccine.

Answer: **hepatitis**

[10] Malfunction of the liver may cause bilirubin stores to increase and cause this condition which results in yellowing of the skin and eyes.

Answer: **jaundice**

<SCI, BIO>

This country was ruled by the Piast Dynasty and underwent three partitions by its neighbors. For 10 points each,

[10] Name this European country that is ruled from Warsaw and was the site of numerous rebellions against the Russian Empire.

Answer: **Poland**

[10] The third partition of Poland was led by this Russian Empress. This leader, known for her love of the arts, had earlier placed Stanislaw Poniatowski [STA-nih-slov poh-nih-TOV-skee] on the Polish throne.

Answer: **Catherine the Great** (accept **Catherine II**; prompt on "Catherine")

[10] At the time of its partitions, Poland was in a personal union with this country. This country, which was ruled from Vilnius, was quickly assimilated by Polish culture.

Answer: Grand Duchy of **Lithuania**

<HIST, EURO>

Name the following dramatic terms that are important to *Romeo and Juliet*, for 10 points each.

[10] *Romeo and Juliet* was printed in Shakespeare's first collection of plays issued in this format, which is larger than a quarto.

Answer: **folio** (accept The First **Folio**)

[10] *Romeo and Juliet* is this type of play, contrasted with Shakespeare's histories and comedies. In this type of play, the heroes' stories end sadly.

Answer: **tragedy**

[10] In the climactic scene of *Romeo and Juliet*, the audience knows that Juliet has taken a sleeping potion, rather than poison, but Romeo does not; that is an example of what literary device?

Answer: **dramatic irony** (prompt on "irony")

<LIT, BRIT>

Not all mythological women were damsels in distress. Answer the following about war goddesses, for 10 points each.

[10] This Norse goddess governed both love and war, and received half of all the men slain in battle at her mead-hall, Folkvangr [FOHLK-vong-ur].

Answer: **Freyja** (do not accept Freyr or Frey)

[10] This Mesopotamian goddess wielded a bow and arrow when she led her troops to war. She also set the Bull of Heaven on mankind after being rejected by Gilgamesh.

Answer: **Ishtar** (accept **Istar**; accept **Inana**)

[10] Ishtar was said to ride these animals into battle. The goddess Sekhmet, the defender of Egypt, is depicted with the head of one of these animals, and Heracles killed a Nemean one of these animals for one of his twelve labors.

Answer: **lion**s (accept Panthera **leo**)

<RMPSS, MYTH>

In an opera by Puccini [poo-CHEE-nee], Musetta, Colline, and Marcello sell their possessions to buy this character some medicine, but she dies before they return. For 10 points each,

[10] Name this operatic character, who asks Rodolfo to help light her candle.

Answer: **Mimi**

[10] Mimi dies of tuberculosis in this Puccini opera, which inspired the musical *Rent*.

Answer: La **Boheme**

[10] *La Boheme* is set in the Latin Quarter and near the Barriere d'Enfer in this French capital city.

Answer: **Paris**

<FA, AUDIO>

It seems like Teddy Roosevelt was the only man who had any fun during the Spanish American War. Answer some questions about his time in Cuba, for 10 points each.

[10]After the explosion of the *Maine*, Roosevelt temporarily became the Secretary for this branch of the military. During those four hours, Roosevelt asked permission to recruit more sailors for this branch.

Answer: United States **Navy**

[10] Not content to sit behind a desk, Roosevelt quickly enlisted. However, after being rejected for his poor eyesight, he instead joined this famous volunteer cavalry regiment.

Answer: The **Rough Riders** (accept **First US** Volunteer Cavalry Regiment)

[10] Roosevelt and the Rough Riders gained acclaim during this battle. During this battle, the Rough Riders charged up Kettle Hill while the First Infantry attacked this battle's other, namesake hill.

Answer: Battle of **San Juan** Hill (accept Battle of **San Juan Heights**)

<HIST, AMER>

This character was originally named Edward Bear, but he acquired his more common name after a little boy visited the London Zoo. For 10 points each,

[10] Name this popular children's character, the best friend of Christopher Robin and Piglet. Answer: Winnie-the-**Pooh** (accept Winnie-ther-**Pooh**; accept **Pooh-Bear**)

[10] This English author created Winnie-the-Pooh for stories he told his son, Christopher Robin, and adapted the tales into books like *The House at Pooh Corner*.

Answer: A(lan) A(lexander) **Milne**

[10] *The House at Pooh Corner* and other Winnie-the-Pooh tales were illustrated by E.H. Shepard, who also illustrated this novel about Toad of Toad Hall, written by Kenneth Grahame.

Answer: The **Wind in the Willows**

<LIT, BRIT>

Iron is essential to the Haber process because it lowers this quantity, allowing hydrogen and nitrogen to combine. For 10 points each,

[10] Name this measure of the minimum amount of energy needed to start a chemical reaction. It is lowered by the introduction of catalysts.

Answer: **activation energy** (accept **Ea**)

[10] This complex is formed once activation energy is reached, though it is an unstable intermediate that reforms into the products almost immediately. In reaction diagrams, this state is marked by a double dagger symbol.

Answer: **transition** state

[10] Transition states always become products in these types of reactions, exemplified by combustion. These reactions proceed in only one direction, as products cannot convert back to reactants.

Answer: **irreversible** reactions

<SCI, CHEM>

After one battle, this man commented, "It is well that war is so terrible--otherwise we would grow too fond of it." For 10 points each,

[10] Name this Confederate general who lost at Gettysburg, and later surrendered at Appomattox Courthouse.

Answer: Robert Edward **Lee**

[10] Lee commented on his fondness for war after this 1862 battle. In the aftermath of this battle, Ambrose Burnside offered his resignation over his poor use of pontoon bridges.

Answer: Battle of **Fredericksburg**

[10] A severe blow to Lee's army was the death of this general at Chancellorsville from friendly fire. This general's actions at the First Battle of Bull Run earned him the nickname "Stonewall."

Answer: Thomas Jonathan "Stonewall" **Jackson**

<HIST, AMER>

This man painted *Cafe Terrace at Night* and *Bedroom in Arles* [AHRL], along with forty-three self-portraits, one of which has a bandaged ear. For 10 points each,

[10] Name this Dutch painter of *The Potato Eaters* and the swirly *Starry Night*.

Answer: Vincent (Willem) **Van Gogh**

[10] Van Gogh briefly lived with this other artist, who may have been responsible for removing Van Gogh's ear. This Frenchman painted Tahitian *Bathers* and *The Yellow Christ*.

Answer: (Eugene Henri) Paul **Gauguin**

[10] While they were rooming together, Gauguin painted a portrait of Van Gogh entitled *The Painter of* these flowers. Van Gogh painted several still lifes showing these large flowers in a vase on a blue background. Answer: **sunflower**s (accept **tournesol**s)

<FA, VISUAL>

For 10 points each, give the following about intersecting lines.

[10] The intersection of two lines creates four angles; no matter what angles are created, what is the sum of the degree measurements of those four angles?

Answer: **360** degrees

[10] Of those four angles, there will be two pairs of angles with equal measurement that are on opposite sides of the intersection point. This term describes those equal angles.

Answer: **vertical** angles

[10] This term describes a line that intersects two other lines at two different points; if those two other lines are parallel, this line creates pairs of equal alternating angles and equal corresponding angles.

Answer: **transversal** (do not accept "transverse")

<SCI, OTHER>

This city's 581-foot-tall BT Tower became its tallest building in 1962, but it remained "officially secret" and left off of official maps until a member of Parliament "revealed" its existence and address in 1993. For ten points each,

[10] Name this city. The BT Tower is visible from Buckingham Palace a few miles south, even if you aren't in on the secret.

Answer: **London**, England

[10] The BT Tower is a brisk walk from the Regent's Park and Great Portland Street stations of this London subway system.

Answer: London **Underground** (prompt on "The Tube")

[10] A longer walk southwest of the BT Tower will take you to this park east of Kensington Gardens. Ignore the hecklers at its Speakers' Corner, where you are allowed to insult the Queen.

Answer: **Hyde Park**

<GEO, GEO>

This author spent two years, two months, and two days living in the woods in Massachusetts. For 10 points each,

[10] Identify this American author, who promoted self-reliance in his book *Walden*.

Answer: Henry David **Thoreau**

[10] Henry David Thoreau belonged to this American literary movement, which promoted intellectual freedom and independence from government and society.

Answer: **Transcendental**ism (accept word forms like **Transcendental**ist)

[10] Thoreau protested government presence in his life by not paying his taxes and by writing this essay, in which he rails against slavery and the Mexican-American War and argues that the "government is best which governs least."

Answer: **Civil Disobedience** (accept **Resistance to Civil Government**)

<RMPSS, PHIL>

This mineral is found in emery powder and was used to construct the first laser. For 10 points each,

[10] Name this crystalline form of aluminum oxide, found in gemstones like ruby and sapphire.

Answer: **corundum**

[10] Corundum is usually mined from deposits of gneiss [nice], schist, marble, and other examples of this rock type. This type of rock forms when a pre-existing rock is chemically changed by high heat and pressure.

Answer: **metamorphic** rock

[10] Corundum can scratch almost every other mineral except diamond because it has a hardness of 9 on this scale.

Answer: **Mohs** scale

<SCI, OTHER>

This letter claims that "the wages of sin is death, but the gift of God is eternal life in Christ." For 10 points each,

[10] Name this book of the Bible, the first in a series of letters written by a man once known as Saul of Tarsus. Answer: Epistle to the **Romans** (accept Book of **Romans**)

[10] Romans is an epistle written by this man, who also wrote to the Corinthians and the Ephesians. Before he was blinded by the Holy Spirit on the road to Damascus, this man was known as Saul.

Answer: Saint **Paul** the Apostle

[10] Romans, Corinthians, and Ephesians are books in this section of the Bible, which begins with the gospels of Matthew, Mark, Luke, and John and ends with the book of Revelation.

Answer: **New Testament**

<RMPSS, REL>

Answer some questions about the history of India. For 10 points each,

[10] Name this surname of two Indian leaders, the Prime Minister Indira and the non-violent leader of the Salt March, Mahatma

Answer: **Gandhi**

[10] Indira Gandhi's father was this first post-independence Prime Minister of India. On the eve of independence, this man gave his "Tryst with Destiny" speech.

Answer: Jawaharlal **Nehru**

[10] India achieved independence during a partition which also created this country. This country whose name means "Land of the Pure" later had its eastern portion became Bangladesh.

Answer: Dominion of **Pakistan**

<HIST, WORLD>

Although President, this man let Valentin Gomez Farias focus on the governing of his nation. For 10 points each,

[10] Name this one-legged general who ordered the Goliad Massacre and defeated Texan forces under William Travis at the Alamo.

Answer: Antonio Lopez de **Santa Anna**

[10] Santa Anna led this nation in a war against its northern neighbor, the United States. Under Stephen Austin, Texas seceded from this Spanish-speaking nation.

Answer: **Mexico**

[10] With the support of Napoleon III, this Austrian nobleman ruled Mexico as its Emperor for three years. Answer: **Maximilian I** (prompt on "Maximilian")

<HIST, WORLD>

This band was originally called Sweet Children, and they performed their song "Basket Case" at their 2015 induction into the Rock and Roll Hall of Fame. For 10 points each,

[10] Name this pop punk band that, in 2012, released three albums titled *iUno!*, *iDos!*, and *iTre!*. Their album *21st Century Breakdown* was released five years after their album *American Idiot*.

Answer: **Green Day**

[10] This lead vocalist and guitarist of Green Day founded the band with Mike Dirnt in 1986.

Answer: Billie Joe **Armstrong**

[10] Billie Joe Armstrong wrote this song about the death of his father. In it, Armstrong notes that "Summer has come and passed / the innocent can never last."

Answer: **Wake Me Up When September Ends**

<TRASH, POP CULT>

Some chemicals are used as weapons. For 10 points each,

[10] Soldiers were burned in World War I when this gas, containing impure sulfur, was dropped from planes. Its yellow-brown color gave this substance its name.

Answer: **mustard** gas (accept sulfur **mustard**s)

[10] The first poison gas deployed in World War I consisted of this gaseous element. In small quantities, this element can be used to disinfect water supplies.

Answer: **chlorine** (accept **Cl** or **Cl2**)

[10] This organophosphorus nerve agent causes a rapid loss in muscle function and was infamously used in a Tokyo subway attack in 1995.

Answer: **sarin** (accept **GB**)

<SCI, CHEM>

This psychologist discussed the "pleasure principle" in his book *Civilization and its Discontents*. For 10 points each,

[10] Name this Austrian founder of psychoanalysis who theorized that the mind is made up of the id, the ego, and the superego.

Answer: Sigmund **Freud** (accept Sigismund Schlomo **Freud**)

[10] "Irma's Injection" was one of the title events that Freud analyzed in his book on the *Interpretation of* these events. Freud argued that these experiences, which happen during sleep, are forms of "wish-fulfilment." Answer: **dream**s (accept The **Interpretation of Dreams**)

[10] Freud paired this concept with "totem" in the title of a collection of his essays. This term refers to practices that are forbidden by societal rules, such as incest and cannibalism.

Answer: **taboo**

<RMPSS, SOC SCI>

In this work, Shahryar beheads all of his wives except one. For 10 points each,

[10] Name this collection of Persian stories, including the tale of "Ali Baba and the Forty Thieves" and the story of Aladdin.

Answer: One **Thousand and One** Arabian **Nights** (accept The **Thousand and One Nights** or A **Thousand and One Nights**; accept The **Arabian Nights**)

[10] This sister of Dunyazad is the narrator of the *Thousand and One Nights*. She leaves her stories on cliffhangers every night to stop her husband, Shahryar, from beheading her.

Answer: **Scheherazade** [sha-HARE-ah-zod] (accept **Shahrazad**)

[10] The *Thousand and One Nights* describes the travels of this sailor, who encounters enormous birds called rocs ["rocks"] in his seven voyages.

Answer: **Sinbad** the Sailor (accept **Sindbad** the Sailor)

<LIT, OTHER>

For 10 points each, name the following types of mathematical statements.

[10] Mathematical systems begin with these basic assumptions that cannot be derived or proven from the other statements in a system. Euclid's Elements opens with twenty-three definitions of terms and five of these statements.

Answer: **postulate**s (accept **axiom**s)

[10] A common quip is that mathematicians are simply machines for turning coffee into these mathematical statements. These statements have been proven from definitions, axioms, and postulates, or from other assumed information.

Answer: **theorem**s

[10] Sometimes, you need to prove a small fact to assist the proof of your larger theorem; in that case, the small fact is called one of these statements, rather than a theorem.

Answer: **lemma**s

<SCI, OTHER>

Benedict Arnold's treatment during this battle led him to defect to the British. For 10 points each,

[10] Name this battle of the American Revolution in which American forces successfully defended a British invasion of upper New York.

Answer: Battle of **Saratoga**

[10] During the Battle of Saratoga, this British general was forced to surrender, and rather than let them be taken prisoner, this man arranged for his troops to return to England.

Answer: John **Burgoyne**

[10] After the surrender of John Burgoyne, this European nation formalized its alliance with the United States, and that alliance with this country brought the aid of the Marquis of Lafayette.

Answer: Kingdom of **France**

<HIST, AMER>

In Lewis Carroll's novel *Through the Looking Glass*, this girl learns the words "brillig" and "slithy" from a poem recited by Humpty Dumpty. For 10 points each,

[10] Name this little girl, who has many strange *Adventures in Wonderland*.

Answer: **Alice** Liddell

[10] This *Wonderland* character's insanity may have been caused by the mercury used in his profession. He recites the poem "Twinkle, Twinkle, Little Bat" to Alice, the March Hare, and a Dormouse.

Answer: the Mad **Hatter**

[10] In *Through the Looking Glass*, Tweedledee and Tweedledum recite this poem to Alice. The two title characters talk of "cabbages and kings" before befriending a group of oysters and then eating them.

Answer: The **Walrus and the Carpenter**

<LIT, BRIT>

Frederic Chopin's [shoh-PAN's] Opus 10, Number 5 only uses these objects to play the right hand triplets. For 10 points each,

[10] Name these objects, of which thirty-six are present on standard pianos.

Answer: the **black key**s of a piano or keyboard (do not accept or prompt on "piano keys")

[10] Chopin's *Black Key* work is this type of short, difficult piano composition meant to practice technical skills and challenge a student.

Answer: **etude**

[10] Chopin's 12th etude, nicknamed *Revolutionary*, was dedicated to this friend, the Hungarian composer of the *Hungarian Rhapsodies*.

Answer: Franz **Liszt**

<FA, AUDIO>

This organelle exists in rough and smooth variations. For 10 points each,

[10] Name this organelle crucial to transport within the cell whose rough form is studded with ribosomes.

Answer: **E**ndoplasmic **R**eticulum

[10] This digestive organelle is formed by the ER and has an acidic interior where enzymes break down biomolecules.

Answer: **lysosome**

[10] A lack of the lysosomal enzyme hexosaminidase A results in this disease, that causes nerve cells to degenerate and lipids to accumulate in the brain. This disease is prevalent in people of Ashkenazi Jewish descent.

Answer: **Tay-Sachs** disease

<SCI, BIO>

West Egg, East Egg, and the Valley of Ashes are locations in this highly symbolic novel. For 10 points each,

[10] Identify this F. Scott Fitzgerald novel about a mysterious bootlegger and his love for Daisy Buchanan. This novel is narrated by Daisy's cousin, Nick Carraway.

Answer: The **Great Gatsby**

[10] In *The Great Gatsby*, a fading billboard representing God looms over the Valley of Ashes and advertises the services of Dr T.J. Eckleburg by displaying these body parts.

Answer: **eye**s (prompt on "glasses")

[10] Gatsby's longing for Daisy is represented in the novel by a light of this color that sits at the end of the Buchanan's dock.

Answer: **green**

<LIT, AMER>

This river creates Horseshoe Bend in Arizona and flows into two of the largest reservoirs in America, including Lake Powell and one formed by the Hoover Dam. For 10 points each,

[10] Name this western US river, whose water supply provides hydroelectric power and irrigation for much of the West.

Answer: **Colorado** River

[10] The Colorado River carved this 277-mile long feature in northern Arizona, now visited by millions of tourists each year.

Answer: **Grand Canyon**

[10] This reservoir behind the Hoover Dam has the largest maximum water capacity in the United States, but due to drought and overuse, hasn't been full since 1983.

Answer: Lake **Mead**

<GEO, GEO>

This planet is the densest of our solar system's gas giants. For 10 points each,

[10] Name this eighth planet from the sun, known for its deep blue color.

Answer: **Neptune**

[10] Neptune's southern hemisphere contains this giant storm. This storm shares a similar name with one found on Jupiter.

Answer: **Great Dark Spot**

[10] The only sizable moon in our solar system to have a retrograde orbit is this largest moon of Neptune. Answer: **Triton**

<SCI, OTHER>

This god is often depicted holding a Sudarshana Chakra in one of his four hands. For 10 points each,

[10] Name this preserver god, whose consort is Lakshmi. This god forms the Trimurti alongside Brahma and Shiva.

Answer: **Vishnu**

[10] This avatar of Vishnu drives Arjuna's chariot in the *Bhagavad Gita*. A group that chants "Hare" [HAH-ray] worships this figure.

Answer: **Krishna** (accept **Govinda**; accept **Gopala**)

[10] Vishnu, Brahma, and Shiva form the Trimurti in this Indian religion, whose religious texts include the Vedas and Upanishads.

Answer: **Hindu**ism

<RMPSS, MYTH>

This event was fictionalized in *Inherit the Wind*. For 10 points each,

[10] Name this event in which a Tennessee school teacher was accused of violating the Butler Act. During this trial, Clarence Darrow argued that the Butler Act was unconstitutional

Answer: The **Scopes** Monkey **trial** (accept The State of Tennessee vs John Thomas **Scopes**)

[10] John Scopes violated the Butler Act by teaching this scientific theory. According to the law, teaching this theory denied the Bible's origin of man.

Answer: human **evolution**

[10] The prosecutor in the Scopes Monkey Trial was this man. This former Secretary of State had resigned after Woodrow Wilson's aggressive stance towards Germany.

Answer: William Jennings **Bryan**

<HIST, AMER>

Answer the following about nudes in art, for 10 points each.

[10] A nude man is inscribed in a square and a circle in *The Vitruvian Man*, a work by this Italian scientist and artist, who also painted *The Last Supper*.

Answer: **Leonardo da Vinci** (accept either underlined portion)

[10] This half-nude statue of a Greco-Roman love goddess may once have held an apple to represent the judgment of Paris, but is currently missing her arms.

Answer: **Venus de Milo** (accept **Aphrodite of Milos**; prompt on "Venus" or "Aphrodite" alone)

[10] This Flemish painter is known for his paintings of curvy, nude women and a dramatic *Descent from the Cross*.

Answer: Peter Paul **Rubens**

<FA, VISUAL>

This man remained Commander-in-Chief of the British Army until his death in 1852. For 10 points each,

[10] Name this British general, and later Prime Minister, who led troops during the Napoleonic Wars.

Answer: Arthur **Wellesley**, First Duke of **Wellington** (accept either underlined name; accept Earl or Marquess of **Wellington**)

[10] The Duke of Wellington also led troops during the Peninsular War, a war over control of this location. This region contains Spain and Portugal, and is separated from France by the Pyrenees.

Answer: **Iberia**n Peninsula

[10] In yet another war, The Duke of Wellington defeated the Maratha Confederacy in this country. In the aftermath of his victory in this country, Delhi was ceded to the British Empire.

Answer: **India**

<HIST, EURO>

This effect causes police sirens to change pitch as they pass you. For 10 points each,

[10] Name this effect that increases the observed frequency of waves from an approaching source.

Answer: **Doppler**-Fizeau effect

[10] In this phenomenon, an example of the Doppler effect, light from astronomical objects moving away from the observer decreases in frequency. In the opposite phenomenon, light appears more blue than it actually is.

Answer: **redshift**

[10] Special relativity explains the Doppler effect as a consequence of this phenomenon, seen when a clock on the Space Shuttle ran slightly slower than a reference clock on Earth. It is also the cause of the twin paradox. Answer: **time dilation**

<SCI, PHYS>

This satirical novel begins with its title character being thrown out of Castle Thunder-ten-Tronck and ends with him declaring "let us cultivate our garden." For 10 points each,

[10] Name this novel by Voltaire, in which the pure-hearted title character ends up living on a farm with Cunegonde [koo-nay-GOND], Martin, Cacambo, and his mentor.

Answer: **Candide** [kan-DEED]; or, Optimism (accept **Candide** ou l'optimisme)

[10] This mentor to Candide is a parody of Gottfried Leibniz's [LYB-nits] optimistic philosophy. This character repeatedly declares that "all is for the best in this best of all possible worlds."

Answer: Dr **Pangloss**

[10] Voltaire wrote *Candide* in this language. This is also the native language of Guy de Maupassant [gee duh moh-pah-SAWN], who legendarily ate his lunch under the Eiffel Tower to avoid having to look at it. Answer: **French** (accept le **fran.;ais**)

<LIT, EURO>

Eros used this type of weapon to turn Daphne's heart to stone. When he accidentally cuts himself with a golden one, he falls in love with Psyche. For 10 points each,

[10] Name these objects that come in gold and lead varieties, which Eros shoots from his bow to create love or hate.

Answer: **arrow**s

[10] This man reveals his identity to his wife's suitors by shooting an arrow through the sockets of twelve axes. He then uses the bow to kill the suitors and reclaim the throne of Ithaca.

Answer: **Odysseus**

[10] This man is killed by a well-aimed arrow that hits the only part of this man that isn't immortal, his heel.

Answer: **Achilles**

<RMPSS, MYTH>

This woman left Virginia with John Rolfe, but died before she could return home. For 10 points each,

[10] Name this Native American woman, who interacted with the Jamestown settlers. After her conversion to Christianity, this woman took the name Rebecca.

Answer: **Pocahontas** (accept **Matoaka**; accept **Amonute**)

[10] Pocahontas allegedly saved this Englishman from her father's club. However, most historians agree that the event never happened.

Answer: John **Smith**

[10] Pocahontas' father was this Native American chief who led a namesake tribe. Answer: **Powhatan** (accept **Wahunsenacawh**)

<HIST, AMER>

The figure on the left of this painting raises his hand in welcome, while his wife stands next to him in green, holding her long skirts over her stomach. For 10 points each,

[10] Identify this masterpiece by Jan van Eyck [yahn van ike], which shows a namesake merchant and his bride. Answer: The **Arnolfini Wedding** (accept The **Arnolfini** (Double) **Portrait**; accept Giovanni **Arnolfini** and His **Bride**; accept any other answer including **Arnolfini** and the suggestion of a wedding or marriage)

[10] This citrus fruit, a symbol of the Medici family, sits under an open window in *The Arnolfini Wedding*.

Answer: **orange**

[10] 0range trees appear on the left of this painting by Botticelli, in which the title Roman goddess of beauty rises from the ocean on a seashell.

Answer: The **Birth of Venus** (accept **Nascita di Venere**)

<FA, VISUAL>

The narrator of this novel joins Queequeg and Starbuck aboard the *Pequod*, and tells the reader to "call me Ishmael." For 10 points each,

[10] Name this novel about Captain Ahab's search for the title character, who bit off Ahab's leg.

Answer: **Moby Dick**; or, The Whale

[10] *Moby Dick* was written by this American author. John Claggart is accidentally killed by the title character of his novella *Billy Budd*.

Answer: Herman **Melville**

[10] Turkey, Nippers, and Ginger Nut are coworkers of the title character of this Melville short story, who responds "I would prefer not to" when asked to work.

Answer: **Bartleby, the Scrivener**

<LIT, AMER>

After the Great Upheaval in 1755, the Acadians were expelled to, among other places, this modern-day state. For ten points each,

[10] Name this Gulf Coast state, whose bilingual tradition is maintained by multiple ethnic groups, including the Cajuns.

Answer: **Louisiana**

[10] This is Louisiana's second most common language, spoken by the settlers who owned it prior to the Louisiana Purchase.

Answer: **French**

[10] This pidgin language has French and African roots, and is still spoken in Louisiana. The name for this language is also used generally to refer to any language naturally formed from a pidgin.

Answer: **Creole**

<GEO, GEO>

This text includes the "Cow" sura, and is divided into ayat. For ten points each,

[10] Name this most holy text of Islam, which recounts Allah's revelations to Muhammad.

Answer: al-**Quran**

[10] The Quran was revealed to Muhammad by this archangel, who gave a revelation to Mary in Christianity. Answer: **Jibreel** (accept **Gabriel**)

[10] This other holy text of Islam collects the teachings and sayings of Muhammad and his disciples.

Answer: a**Hadith**

<RMPSS, REL>

Charles Darwin titled a chapter of his book *On the Origin of Species* with this term. For 10 points each,

[10] Name this mechanism of evolution, whereby the individuals most fit for an environment survive and reproduce. Darwin used this term to explain the enormous variety of finch species on the Galapagos Islands.

Answer: **natural selection**

[10] Darwin classified the Galapagos finches based on this organ, which is used for cracking seeds, digging into cacti, or hunting insects in various species.

Answer: **beak**s

[10] Finches' beaks are an example of this kind of evolutionary structure; the beaks are descended from a feature of a common ancestor, but are used for different purposes. The wing of a bat, the flipper of a whale, and the arm of a human are also this type of structure.

Answer: **homologous** structure (accept word forms like **homology**)

<SCI, BIO>

This leader was attacked and denounced in the "Secret Speech." For 10 points each,

[10] Name this ruler, who outmaneuvered Leon Trotsky to succeeded Vladimir Lenin. This man led his country through World War II.

Answer: Joseph **Stalin** (accept Ioseb **Dzhugashvili**)

[10]The "Secret Speech" was given by this successor to Stalin. During a meeting with the United Nations, this leader allegedly banged his shoe on a table in protest.

Answer: Nikita Sergeyevich **Khrushchev**

[10] Both Stalin and Khrushchev were leaders of this communist state, whose last leader was Mikhail Gorbachev.

Answer: **U**nited **S**oviet **S**ocialist **R**epublics (accept **Soviet Union**; accept **CCCP**)

<HIST, EURO>

This author wrote, "The ship has weather'd every rack, the prize we sought is won " in one of his elegies for Abraham Lincoln. For 10 points each,

[10] Identify this American poet, whose poem "Crossing Brooklyn Ferry" begins "Flood-tide below me!" This author of "0 Captain! My Captain!" spent much of his life revising his collection *Leaves of Grass*.

Answer: Walter "Walt" **Whitman** Jr.

[10] Like "0 Captain! My Captain!", this Walt Whitman poem is an elegy for Abraham Lincoln. The narrator speaks of a "western fallen star" in the "moody, tearful night."

## Answer: **When Lilacs Last in the Dooryard Bloom'd**

[10] In this fifty-two-part Walt Whitman poem, the narrator sounds his "barbaric yawp over the rooftops of the world." This long poem begins, "I celebrate myself, and sing myself."

Answer: **Song of Myself**

<LIT, AMER>

This quantity measures the average kinetic energy of particles in a substance. For 10 points each,

[10] Name this quantity measured by the Celsius and Kelvin scales that is based on the thermal motion of a substance.

Answer: absolute **temperature** (accept **T**)

[10] This law of thermodynamics states that heat will not flow spontaneously from a colder body to a warmer one, unless work is performed on the system. In other words, heat transfers in a closed system always produce an increase in entropy.

Answer: **second** law of thermodynamics

[10] In a famous thought experiment, this scientist posited a demon which allows only fast molecules to traverse a door, decreasing the entropy of a closed system and so violating the second law of thermodynamics. Answer: James Clark **Maxwell**

<SCI, CHEM>

This video game recently replaced Peter Dinklage with Nolan North. For 10 points each,

[10] Name this "shared-world shooter" whose third expansion, *The Taken King*, was released in September 2015.

Answer: **Destiny**

[10] Destiny is a game created by this company. This company also created *Halo* and later lost the rights to *Halo* to 343 Industries.

Answer: **Bungie**, Inc

[10] 343 Industries was formed by this parent company after this company split with Bungie in 2007. This company was founded by Paul Allen and Bill Gates.

Answer: **Microsoft** Studios

<TRASH, POP CULT>

Two Hittite spies were tortured in the prelude to this battle, and one side in this battle was commanded by Muwatallis II. For 10 points each,

[10] Name this 1274 BCE battle in which the Ra and Ptah divisions contributed to the largest chariot battle in history.

Answer: Battle of **Kadesh**

[10] The Battle of Kadesh was won by this empire. During the battle, this empire's troops were commanded by a pharaoh.

Answer: **Egypt**ian Empire

[10] The commander of the Egyptian forces for the Battle of Kadesh was this pharaoh, the husband of Nefertiti who ordered the construction of Abu Simbel.

Answer:**Ramses II** (prompt on "Ramses;" accept **Ramses the Great**; accept **Ozymandias**)

<HIST, OTHER>

This style of music's popularity in the 1920s helped lead to a raucous "Age" named for it. For 10 points each,

[10] Name this American musical genre, played by trumpeter Louis Armstrong and pianist Duke Ellington.

Answer: **jazz**

[10] Jazz is often decried as musicians just "making it up," but a lot of talent and technical practice is required to be good at this process of immediate musical composition.

Answer: **improvisation** (word forms)

[10] Jazz makes heavy use of this technique, the shifting or breaking of the natural flow of the rhythm by placing accents on offbeats or other unusual places. Backbeats are an example of this technique.

Answer: **syncopation** (accept word forms like **syncopate**d rhythm)

<FA, AUDIO>

This theorem was proven by James Garfield in 1876 and by its namesake, a Greek philosopher and mathematician, millennia earlier. For 10 points each,

[10] Name this theorem comparing the lengths of the sides of right triangles. The corresponding formula is usually stated as "a squared plus b squared equals c squared."

Answer: **Pythagorean** Theorem (accept **Pythagorean** Formula)

[10] Garfield's proof of the Pythagorean Theorem involves a particular arrangement of two copies of a right triangle with a line segment connecting two vertices, forming one of these specific four-sided shapes.

Answer: **trapezoid** (prompt on "quadrilateral")

[10] Garfield's proof involves the computation "quantity a plus b, quantity squared, equals a squared plus 2 times a times b plus b squared"; that computation can be done using this theorem, which guides the expansion of two-term quantities like "a plus b" that are raised to exponents. Pascal's triangle is often consulted in using this theorem.

Answer: **Binomial** Theorem (accept **Binomial** Formula)

<SCI, OTHER>

Porfiry Petrovich investigates this novel's protagonist's murder of a pawnbroker. For 10 points each,

[10] Name this novel about Rodion Raskolnikov, who justifies killing Alyona Ivanova by saying he wants to be Napoleon.

Answer: **Crime and Punishment** (accept **Prestupleniye i nakazaniye**)

[10] This author of *Crime and Punishment* and *The ldiot* also wrote a novel about Dmitri, Ivan, and Alyosha.

Answer: Fyodor Mikhailovich **Dostoevsky**

[10] In another Dostoevsky novel, Smerdyakov shares this relationship with Dmitri, Ivan, and Alyosha Karamazov.

Answer: half-**brother**s (accept half-**sibling**s)

<LIT, EURO>

When following the scientific method, one of these statements can be tested by performing an experiment. For 10 points each,

[10] Identify the term for this kind of prediction about the outcome of an experiment or a process in nature. These statements are often written in "If, Then" form.

Answer: **hypothesis** (accept **hypotheses**)

[10] When a hypothesis has been repeatedly confirmed by experimentation or observation, it becomes one of these, a well-supported explanation of how nature works. Einstein famously devised one of relativity.

Answer: **theory**

[10] The process of turning a hypothesis into a theory often involves this type of reasoning, in which specific cases are used to make a general rule. This type of reasoning allowed Kepler to determine the elliptical orbits of planets after observing the movement of Mars.

Answer **inductive** reasoning (accept **induction**)

<SCI, OTHER>

At the beginning of this play, it is predicted one man will be king but his friend will beget a line of kings. For 10 points each,

[10] Name this so-called "Scottish Play," a tragedy by Shakespeare about a title Thane of Glamis who, along with his scheming wife, murders his way to the throne, only to be undone by fear and paranoia.

Answer: The Tragedy of **Macbeth**

[10] In Macbeth, this man is predicted to sire a line of kings. Macbeth suspects this man and his son, Fleance, of plotting against him, so he has this man killed.

Answer: **Banquo**

[10] The three witches that appear to Macbeth and Banquo at the beginning of the play are known by this name. A rock group in Harry Potter also goes by this name.

Answer: The **Weird Sisters**

<LIT, BRIT>

This President signed Executive 0rder 9981 which desegregated the armed forces. For 10 points each,

[10] Name this successor to Franklin Roosevelt whose namesake doctrine provided aid to Turkey and Greece.

Answer: Harry S. **Truman**

[10] Early in his career, Truman served as a Senator from this state. While in this state, Truman was aided by Tom Pendergast in becoming a Jackson County judge.

Answer: **Missouri**

[10] During the election of 1948, the Chicago Tribune mistakenly reported that this politician had beaten Truman.

Answer: Thomas E(dmund) **Dewey**

<HIST, AMER>

The connection of living beings to the earth was of great importance to many early religions. Answer the following about mud and dirt, for 10 points each.

[10] Humans were created from earth, wood, and maize in the *Popol Vuh*, the holy book of this mesoamerican culture that ruled lands south of the Aztec Empire from its capital, Chichen Itza.

Answer: **Maya**n Empire

[10] In Greek mythology, this titan used mud to create the first humans. This man was later chained to a rock, where an eagle consumed his liver every day.

Answer: **Prometheus**

[10] In old Jewish folklore, the Maharal of Prague created this animatronic creature out of clay to protect the Prague Ghetto from attacks.

Answer: **golem**

<RMPSS, MYTH>

He used a cathode ray tube to conduct groundbreaking research on subatomic particles. For 10 points each,

[10] Name this scientist who showed that the beam from a cathode ray tube is negatively charged, establishing the existence of the electron.

Answer: J(oseph) J(ohn) **Thomson**

[10] Thomson's subsequent model of the atom was given this name as it was thought that the electrons were evenly dispersed in a positive charge, resembling a traditional Christmas dessert.

Answer: **plum pudding** model

[10] Thomson's work on the plum pudding model was conducted in this country at the Cavendish Laboratory of Cambridge University.

Answer: **England** (accept Great **Britain**; accept **U**nited **K**ingdom)

<SCI, CHEM>

This Greek deity was once hung from the sky with anvils on her ankles for attempting to rebel against Zeus. For 1O points each,

[1O] Name this wife of Zeus, the Queen of Heaven and goddess of marriage. Answer: **Hera** (do not accept Juno)

[1O] Hera is sometimes shown holding this fruit. Persephone ate some seeds of this fruit, which condemned her to live part of each year in the underworld.

Answer: **pomegranate**

[1O] Persephone's time in the underworld saddened this goddess of the harvest, who casts the world into winter while Persephone is away from her.

Answer: **Demeter**

<RMPSS, MYTH>

Ross Gorman used this single-reed instrument to improvise a glissando at the beginning of *Rhapsody in Blue*. For ten points each,

[1O] Name this woodwind that is higher in pitch than a bassoon yet lower than a flute. It has a larger range than an oboe.

Answer: **clarinet**

[1O] This composer of *Rhapsody in Blue* evoked Caribbean rhythms in his *Cuban Overture* and described his travels in *An American in Paris*.

Answer: George **Gershwin**.

[1O] This composer wrote the clarinet concerto *Gnarly Buttons* and heavily used woodblock in his *Short Ride in a Fast Machine*.

Answer: John Coolidge **Adams** (do not accept "John Luther Adams")

<FA, AUDIO>

This man led the Revolt of the Sergeants in 1933 against Gerardo Machado and controlled the military during the Pentarchy. For 1O points each,

[1O] Name this cruel Cuban leader who fled to Salazar's Portugal after his deposition in 1959.

Answer: Fulgencio **Batista** y Zaldivar

[1O] This Communist took power after Batista's fall. His acceptance of Soviet arms caused the Cuban Missile Crisis.

Answer: Fidel Alejandro **Castro** Ruz

[1O] The United States tried to oust Castro in this CIA-backed operation in which John F. Kennedy ordered an attack by Brigade 25O6.

Answer: **Bay of Pigs** Invasion (accept **Invasion de Playa Giron** or Invasion de **Bahia de Cochinos**)

<HIST, AMER>

Samuel Taylor Coleridge collaborated on a collection of these long poems. For 1O points each,

[1O] Name this style of poetry exemplified by Coleridge's "Lyrical" ones. These long poems tell stories and are traditionally set to music.

Answer: **ballad**s (accept Lyrical **Ballad**s)

[1O] Coleridge composed the *Lyrical Ballads* with this Romantic poet, who wrote "Tintern Abbey" and "I wandered lonely as a cloud."

Answer: William **Wordsworth**

[1O] In this long Coleridge poem from *Lyrical Ballads*, a ship's crew blame the title sailor for their misfortune after he shoots an albatross, moaning that there is "water, water everywhere I nor any drop to drink."

Answer: The **Rime of the Ancient Mariner**

<LIT, BRIT>

In a triangle, these three lines meet at the incenter. For 1O points each,

[1O] This is the term for a line or line segment that divides an angle into two new angles with equal measurements.

Answer: angle **bisector**

[1O] The incenter of a triangle is unusual in that it only falls on the Euler [oy-lur] line if at least two of the angle bisectors are of equal length, which only occurs if the triangle has this property.

Answer: **isosceles** triangle

[1O] The angle bisectors meet at the incenter; the altitudes of a triangle meet at this other central point. Answer: **orthocenter**

<SCI, OTHER>

This battle was codenamed Operation Detachment. For 1O points each,

[1O] Name this battle over a Pacific island during which the *USS Bismarck Sea* was sunk. During this battle, Joe Rosenthal photographed a group of soldiers raising a US flag.

Answer: Battle of **Iwo Jima**

[1O] Joe Rosenthal's photograph was taken at the peak of this mountain. During the fight for Iwo Jima, the Japanese were highly entrenched at this location.

Answer: Mount **Suribachi** (accept **Suribachi**yama)

[1O] Rosenthal's photograph was recreated in a memorial for this branch of the military. This branch of the military uses the motto "Semper Fidelis" and works closely with the Navy.

Answer: United States **Marine** Corps (accept **USMC**)

<HIST, AMER>

A turning point in the study of genetics was reached when Frederick Griffith injected different strains of pneumonia into this species. For 1O points each,

[1O] Name this small, white mammalian organism whose "knockout" varieties are used to study human diseases like obesity and Parkinson's.

Answer: **mouse** (accept **M**us **musculus**)

[1O] Thomas Hunt Morgan studied the genetic traits of this model organism, whose four chromosome pairs affect traits like curly wings, ebony bodies, and white or red eyes.

Answer: common **fruit fly** (accept **Drosophila**; accept **D**rosophila **melanogaster**; accept **vinegar fly**)

[1O] This species of nematode was first used by Sydney Brenner as a model organism to study the nervous system. It was the first multicellular organism to have its entire genome mapped.

Answer: **C**aenorhabditis **elegans** (prompt on "roundworm")

<SCI, BIO>

This character plans to host a wedding at the Port Authority Bus Terminal, and holds Snowden while he dies. For 1O points each,

[1O] Identify this fictional bombardier, who goes AWOL in Rome with Milo Minderbinder, and is forced to continually fly missions.

Answer: Captain John **Yossarian**

[1O] Yossarian appears in this novel by Joseph Heller, which is named for a paradox that stops Yossarian from being sent home from war. In this novel, Major Major Major is promoted to Major by an IBM machine and Milo Minderbinder founds M&M Enterprises.

Answer: **Catch-22**

[1O] *Catch-22* takes place in Italy during this war. Thomas Pynchon's novel *Gravity's Rainbow*, which features many Nazi V-2 rockets, is also set during this war.

Answer: **World War II**

<LIT, AMER>

1O. This body is orbited by Styx and Nix. For 1O points each,

[1O] Name this former ninth planet from the Sun which was demoted in 2OO6.

Answer: **Pluto**

[1O] Pluto was demoted to this type of planet, characterized by an inability to clear the neighborhood around its orbit.

Answer: **dwarf** planet

[1O] Pluto is located in this region of the solar system, also home to the dwarf planets Haumea [HOW-may-uh] and Makemake [mah-KAY-mah-KAY].

Answer: Edgeworth-**Kuiper belt**

<SCI, OTHER>

This religion's holiest gurdwara, or temple, is the Gold Temple in Amritsar. For 1O points each,

[1O] Name this religion, whose members wear the Five K's. This Indian religion was founded by Nanak, and its holy text is the Adi Granth.

Answer: **Sikh**ism (accept **Sikh**i)

[1O] The Adi Granth is considered the last of these wise teachers of Sikhism. This Sanskrit term describes a trusted, knowledgeable instructor.

Answer: **guru**

[1O] The act of wearing this body part uncut is called Kesh, one of the Five K's of Sikhism. The Keski and Dastar, a cloth and turban, cover this body part.

Answer: **hair**

<RMPSS, REL>

This physicist names a law of dry friction that notes that sliding velocity does not affect the force of friction. For 1O points each,

[1O] Name this Frenchman, whose namesake law describes the inverse-square relationship of the electrical force exerted between two points.

Answer: Charles-Augustin de **Coulomb**

[1O] A coulomb is a measure of this quantity, which is equal to current times time. It is a property that can only be positive or negative, and it measures how matter is affected by an electromagnetic field.

Answer:electric **charge** (accept **q**)

[1O] Coulomb's law was developed to explain this form of electricity caused by an imbalance of charges across two materials. This type of electricity results when a balloon is rubbed with wool, and lightning is also caused by it.

Answer: **static** electricity

<SCI, PHYS>

Sailors in one of this man's poems are killed for sacrificing Helios's cows and stuff their ears with cotton to avoid the song of the sirens. For 1O points each,

[1O] Name this ancient poet, who wrote the *Iliad* and the *Odyssey*.

Answer: **Homer**os

[1O] In Homer's *Odyssey*, this young man is the son of Odysseus and Penelope. When his father returns from war, this man helps kill Penelope's suitors.

Answer: **Telemachus**

[1O] Odysseus uses the drug moly to fend off the advances of the witch Circe, who turns Odysseus's men into these animals.

Answer: **pig**s (accept **swine**)

<LIT, OTHER>

This leader crushed the Scots in the Battle of Worcester, a victory which caused Charles II to flee to France. For 1O points each,

[1O] Name this Lord Protector of the England, who participated in the English Civil War.

Answer: Oliver **Cromwell**

[1O] Cromwell was responsible for conquering this island nation. During his war with this nation, its Catholic Confederation was supported by English Royalists.

Answer: **Ireland**

[1O] After conquering Ireland, Cromwell formed the "Barebone's" version of this body, which in modern times is divided into the House of Lords and the House of Commons.

Answer: **Parliament** (accept Barebone's **Parliament**; accept Rump **Parliament**)

<HIST, EURO>

Emulsions like milk are examples of these substances, which disperse light by the Tyndall effect. For 1O points each,

[1O] Name these mixtures formed from two insoluble compounds. Other examples include gels and aerosols.

Answer: **colloid**s

[1O] In colloids, compounds without this property can still mix with water, whose bent shape gives it this property. This property denotes a charge separation within a molecule, as seen in hydrogen fluoride and ammonia.

Answer: **polar**ity

[1O] This type of mixture results when large particles are temporarily dispersed throughout a fluid. It ceases to exist through sedimentation, such as when sand and soil settle out of muddy water.

Answer: **suspension**

<SCI, CHEM>

For 1O points each, give the following about an artist who used his work *Princess from the Land of Porcelain* as the centerpiece for a colorful, Japanese-inspired room.

[1O] That room is called *Harmony in Blue and Gold*, but is also titled after this showy and colorful bird, whose large tails appear in gold leaf throughout the room.

Answer: **Peacock** Room

[1O] This artist of *Arrangement in Grey and Black* designed the Peacock Room, and painted a controversial *Nocturne in Black and Gold: The Falling Rocket*.

Answer: James (Abbott) McNeill **Whistler**

[1O] Whistler painted *Arrangement in Grey and Black* to represent this close relative of his. Dorothea Lange photographed a "Migrant" one of these women, and Mary Cassatt painted many of these people with their children.

Answer: **mother** (accept variations, such as **mom** or **mum**; accept **Whistler's Mother**; accept Portrait of the Artist's **Mother**; accept **Migrant Mother**)

<FA, VISUAL>

A land bridge spanned this body of water during a period of low sea levels twelve- to twenty thousand years ago. For 1O points each,

[1O] Name this strait that separates the US from Russia.

Answer: **Bering** Strait

[1O] Specifically, the Bering Strait connects the Arctic and Pacific Oceans, passing just west of this state's Seward Peninsula.

Answer: **Alaska**

[1O] These two islands in the Bering Strait are separated by the international date line. The smaller of these islands is owned by the United States; the larger, by Russia.

Answer: **Diomede** Islands (accept the **Diomede**s; accept Big and Little **Diomede** Islands; accept **Inaliq** and **Ignaluk**; accept **Imaqliq**, **Nunarbuk**, or **Ratmanov** in place of "Inaliq" in the previous note)

<GEO, GEO>

After an attack on the city of Lawrence, this man led a massacre near Pottawatomie Creek. For 1O points each,

[1O] Name this abolitionist, who led a raid on Harper's Ferry but was hanged after being captured.

Answer: John **Brown**

[1O] John Brown was heavily involved in this territory's "Bleeding" period. During that period, anti-slavery supporters passed the Topeka Constitution.

Answer: **Kansas** Territory.

[1O] After his death, "John Brown's Body" become a popular song in the North, although it was later adapted into this song by Julia Ward Howe.

Answer: The **Battle Hymn of the Republic**

<HIST, AMER>

Some practitioners of this discipline include Claude Levi-Strauss and Bronislaw Malinowski [BRA-nih-slov ma-lih-NOF-skee]. For 1O points each,

[1O] Identify this academic field sometimes called the "study of mankind." This field often focuses on the unique culture of groups of native people.

Answer: **anthropology** (accept word forms, such as **anthropologist**s)

[1O] For his 1911 book *The Mind of Primitive Man*, this American anthropologist studied the potlatch ceremony of the Kwakiutl [kwah-kee-oo-tull] people. He also developed the term "cultural relativism."

Answer: Franz **Boas**

[1O] Boas founded the anthropology department at this university. Boas taught Edward Sapir, Alfred Kroeber, and Ruth Benedict while he was a professor at this Ivy League university in Upper Manhattan.

Answer: **Columbia** University

<RMPSS, SOC SCI>

In the opening of this book, one character laments "Christmas won't be Christmas without any presents" before she and her sisters decide to play Pilgrim's Progress. For 1O points each,

[1O] Identify this work that focuses on the lives of Jo, Meg, Amy, and Beth March. The author based much of this book on her own experiences growing up in the 18OOs.

Answer: **Little Women**

[1O] *Little Women* was written by this American author. She also wrote several stories under the name AM Barnard for the *Atlantic Monthly*.

Answer: Louisa May **Alcott**

[1O] Alcott tutored the daughter of this Transcendentalist author of the essay *Nature*, who gave the Divinity School Address.

Answer: Ralph Waldo **Emerson**

<LIT, AMER>

This event occurred in the wake of the death of the reformer Hu Yaobang. For 10 points each,

[10] Name this set of student protests crushed by Deng Xiaoping in the June Fourth Massacre. During these protests, students constructed the "Goddess of Democracy."

Answer: **Tiananmen Square** protests (accept 19**89 Democracy Movement**)

[10] The Tiananmen Square protests occurred in this capital of the People's Republic of China. Answer: **Beijing** (accept **Peking**)

[10] Tn a highly symbolic photo taken during the Tiananmen Square protests, an unknown protester stood in front of a line of these vehicles.

Answer: Type 59 **tank**s

<HIST, WORLD>

This holiday is also called "dies cinerum" [dee-ays see-nay-room] because of a mark worn to indicate sorrow and penance. For 10 points each,

[10] Name this holiday, which follows a "Fat" day of feasting and begins the season of Lent.

Answer: **Ash Wednesday**

[10] Lent begins with Ash Wednesday and concludes with Holy Saturday, the day before this Christian holiday. This springtime holiday commemorates the resurrection of Jesus, and is celebrated in modern times with colorful eggs.

Answer: **Easter** Sunday (accept **Pasch**a)

[10] This Christian holiday takes place fifty days after Easter Sunday. Derived from the Jewish holiday Shavuot, it commemorates the day the Holy Spirit descended on the disciples.

Answer: **Pentecost**

<RMPSS, REL>

This group of elements is highly reactive with water; the lightest ones make smoke and the heavier ones explode. For 10 points each,

[10] Name this group, whose ions all have a charge of +1 [plus one], allowing these elements to readily bond with halogens.

Answer: **alkali** metals (accept Group **I**A ["one A"] or **one**; do not accept "alkaline earth metals")

[10] This alkali metal, that is lighter than potassium and heavier than lithium, can bond with chlorine to form table salt.

Answer: **sodium** (accept **Na**)

[10] One can differentiate alkali metals by performing this procedure that typically uses platinum wires for holding samples. This test results in different colors, such as orange for sodium and red for rubidium. Answer: **flame** test

<SCI, CHEM>

For 10 points each, answer the following about an early author of science fiction.

[10] This French author wrote about missions to the unexplored reaches of the world in *Journey to the Center of the Earth* and *Twenty Thousand Leagues Under the Sea*.

Answer: Jules Gabriel **Verne**

[10] Verne also wrote a novel about English adventurer Phileas Fogg, who makes a bet that he can perform this feat in only eighty days.

Answer: travel **around the world** (accept clear equivalents, such as go **around the world** or **circumnavigate the globe**; accept **Around the World** in Eighty Days)

[10] Phileas Fogg travels around the world with this French manservant, who poses as a burning corpse to save Aouda [ah-oo-dah] from performing sati [sah-tee].

Answer: Jean **Passepartout** [pass-par-TOO]

<LIT, EURO>

This conflict was part of the larger Seven Years' War. For 10 points each,

[10] Name this North American war in which Britain defeated a European rival for control of Canada.

Answer: **French and Indian** War

[10] During the capture of the capital of this province, James Wolfe died on the Plains of Abraham. Despite the victory, this Canadian province still maintains its French roots.

Answer: **Quebec**

[10] After the French and Tndian War, this Ottawa chief rebelled against British policies near the Great Lakes. This chief won the Battle of Bloody Run but had earlier failed to take Fort Detroit.

Answer: **Pontiac** (accept **Obwandiyag**)

<HIST, AMER>

The head-to-tail and parallelogram methods are two ways of geometrically adding these quantities. For 10 points each,

[10] Name these physical quantities like velocity and displacement that have both magnitude and direction. Answer: **vector**s (accept **Euclidean vector**; accept **geometric vector**; accept **spatial vector**)

[10] To calculate an object's weight vector on Earth, you must multiply its mass times this constant. Tt has a value of about 9.8 meters per second squared directed towards Earth's center.

Answer: **gravitational acceleration** (accept **acceleration** due to **gravity**)

[10] Gravitational acceleration will cause a satellite orbiting the Earth to experience this type of force directed towards the center of a circular path. A roller coaster traveling through a loop also experiences this force. Answer: **centripetal** force (do not accept "centrifugal force")

<SCI, PHYS>

Name the following about Pixar films, for 10 points each.

[10] The cowboy Woody struggles to see eye-to-eye with Buzz Lightyear in this first in a series of Pixar movies about the inhabitants of Andy's room.

Answer: **Toy Story**

[10] Bob Parr and his family of superheroes must band together to take down superfan-turned-evil-genius, Syndrome, in this Brad Bird-directed film.

Answer: The **Incredibles**

[10] Patton Oswalt voiced this rodent, the protagonist of *Ratatouille*. Tn the film, this character uses Linguini as a puppet to cook at the restaurant formerly headed by Auguste Gusteau.

Answer: **Remy**

<TRASH, POP CULT>

This man included the chapters "Why T Am So Wise" and "Why T Write Such Good Books" in his autobiography, *Ecce Homo*. For 10 points each,

[10] Identify this German philosopher who wrote about the ubermensch in his book *Thus Spoke Zarathustra*.

Answer: Friedrich Wilhelm **Nietzsche**

[10] Nietzsche wrote a controversial book about, and named for, this false messianic figure from the New Testament, which will be opposed during Jesus' second coming.

Answer: **antichrist**

[10] Tn *The Gay Science*, Nietzsche coined this three-word term to show the lack of credibility that a deity has in terms of morality.

Answer: **God is dead** (accept **Gott ist tot**)

<RMPSS, PHIL>

In one of this author's novels, Lucy Steele's former fiance, Edward Ferrars, marries Elinor, and Colonel Brandon proposes to Marianne. For 10 points each,

[10] Name this British author who wrote about the Dashwood sisters in *Sense and Sensibility*. George Knightley marries the title matchmaker in this woman's novel *Emma*.

Answer: Jane **Austen**

[10] Tn this Jane Austen novel, Lydia elopes with George Wickham, and Lady Catherine does not want Elizabeth Bennet to marry her nephew, Mr. Darcy.

Answer: **Pride and Prejudice**

[10] John Thorpe tries to woo Catherine Morland in this other Jane Austen novel. Catherine instead ends up with Henry Tilney, who lives in the title Gothic building.

Answer: **Northanger Abbey**

<LIT, BRIT>

Tn this piece, eleven timpani beats occur in order to begin "The Glorification of the Chosen One." For 10 points each,

[10] Name this ballet originally choreographed by Vaslav Nijinsky. Tt ends with the title pagan sacrifice, and it caused a riot at its Parisian premiere in 1913.

Answer: The **Rite of Spring** (accept Le **Sacre du Primtemps**; accept **Vesna svyashchennaya**)

[10] *The Rite of Spring* was written by this composer of *The Firebird* and *Petrushka*.

Answer: Tgor **Stravinsky**

[10] The first part of *The Rite of Spring*, the "Adoration of the Earth," begins with a solo for this low pitched, double reed woodwind instrument.

Answer: **bassoon**

<FA, AUDIO>

For 10 points each, give the following related to the fact that sine of zero equals zero.

[10] Therefore, the function f of x equals sine of x passes through the point (0,0) ["zero comma zero"]; that point in the Cartesian plane is given this name.

Answer: **origin**

[10] Sine of x is tangent to this line at the origin. Reflecting a relation over this line can be done by swapping the x and y coordinates in every ordered pair; that is, the point (5,0) reflects over this line to the point (0,5). Answer: **y equals x** (accept **x equals y**)

[10] The graph of sine of x has this type of point at the origin because the concavity of the graph changes. Tn sine's case, the graph is concave up immediately to the left of the origin, then concave down immediately to the right of the origin, so the origin is one of these points.

Answer: **inflection** point

<SCI, OTHER>

For 10 points each, answer the following about American poems that concern animals.

[10] Tn this William Carlos Williams poem, "so much depends / upon" the title object, which is "glazed with rain / water / beside the white / chickens."

Answer: The **Red Wheelbarrow**

[10] Tn this poem, the narrator's "horse must think it queer / to stop without a farmhouse near" since the narrator has "miles to go before T sleep."

Answer: **Stopping by Woods on a Snowy Evening**

[10] This poet of "Stopping by Woods on a Snowy Evening" wrote that hunters "would have the rabbit out of hiding / to please the yelping dogs" in his poem "The Mending Wall."

Answer: Robert Lee **Frost**

<LIT, AMER>

This man built a workshop called Taliesin ["tally"-ESS-in] West following the destruction of his Wisconsin home. For 10 points each,

[10] Name this American architect, who created the Prairie Style home "Fallingwater" for the Kaufmann family. Answer: Frank Lloyd **Wright** (accept Frank Lincoln **Wright**)

[10] Wright made a hypothetical design for one of these structures that he called the Tllinois. The Tllinois would have been twice as tall as the Burj Khalifa, which is currently the largest example of these very tall structures. Answer: **skyscraper**s (accept clear equivalents, such as **tower block** or **high rise**)

[10] Wright was mentored by this man, who is sometimes called the "father of the skyscraper." He designed the Wainwright Building and the Carson Pirie Scott Building.

Answer: Louis Henri **Sullivan**

<FA, OTHER>

This man proposed the "Share Our Wealth" plan to combat the Great Depression. For 10 points each,

[10] Name this politician known as "the Kingfish" who wrote *My First Days in the White House* before being assassinated by Carl Weiss.

Answer: Huey P(ierce) **Long**

[10] Tn *My First Days in the White House*, Long wrote that he would make this incumbent Democratic President his Secretary of the Navy.

Answer: **F**ranklin Delano **Roosevelt** (accept **FDR**; prompt on "Roosevelt")

[10] Huey Long was the Governor of this state. During his tenure he made numerous improvements to New Orleans.

Answer: **Louisiana**

<HIST, AMER>

This substance's pH level is maintained by a carbon dioxide and bicarbonate buffering system. For 10 points each,

[10] Name this red bodily fluid that transports oxygen and other life-sustaining compounds throughout the body. Tt contains erythrocytes, leukocytes, and platelets, which clot it.

Answer: **blood**

[10] This protein within red blood cells carries oxygen in its namesake iron-containing group. At low pressures, it is less saturated with oxygen than the similar myoglobin.

Answer: **hemoglobin**

[10] Blood coagulation requires this fat-soluble vitamin that also allows calcium ions to bind to bone. Answer: Vitamin **K**

<SCI, BIO>

The end is nigh! Identify some future disasters in North America for 10 points each.

[10] A 2015 *New Yorker* article detailed the coming destruction of Oregon and British Columbia due to an imminent earthquake in this subduction zone, named for a northwestern mountain range.

Answer: **Cascadia** Subduction Zone (prompt on "Cascade Mountains")

[10] A series of enormous eruptions occurring over millions of years have originated from the supervolcano in this US national park, mostly found in Wyoming.

Answer: **Yellowstone** National Park

[10] The San Andreas fault is projected to cause the separation of this currently continental American state from the mainland, forming an island that could travel north to Alaska.

Answer: **California**

<GEO, GEO>

This Tsar founded the Streltsy. For 10 points each,

[10] Name this Russian Tsar who controlled the *Oprichnina* and murdered his own son. This Tsar, whose cruelty is marked by his epithet, was also responsible for the massacre of Novgorod.

Answer: **Ivan the Terrible** (accept **Ivan IV** Vasilyevich; accept **Ivan Grozny**)

[10] Tvan the Terrible was responsible for the conquest of this northern Russian region. This region, which composes the majority of Russia, is largely a sparsely populated tundra.

Answer: **Siberia**

[10] In celebration of conquering Kazan, Tvan the Terrible constructed this colorful cathedral. According to legend, Tvan had the architect of this structure blinded to preserve its unique beauty.

Answer: **Saint Basil's** Cathedral (accept The **Cathedral of Vasily the Blessed**; accept **Cathedral of the Intercession of the Most Holy Theotokos on the Moat**; accept **Pokrovsky** Cathedral)

<HIST, EURO>

For ten points each, name the following bodies of water in northern Europe.

[10] The isles of Jersey and Guernsey are in this channel, whose narrowest point is between the cliffs of Dover and the mainland city of Calais.

Answer: **English** Channel

[10] The English Channel connects this sea, found between Britain and Scandinavia, to the shores of France.

Answer: **North** Sea

[10] The North Sea, in turn, is connected by the Skagerrak and Kattegat to this sea on whose shores Estonia, Latvia, and Lithuania lie.

Answer: **Baltic** Sea

<GEO, GEO>

Volcanoes have left their mark on the world's mythology. For 10 points each,

[10] Name the Hawai'ian goddess of volcanoes, the daughter of Haumea. Answer: Tutu **Pele** (accept Madame **Pele**)

[10]According to legend, the Yatsugatake Mountains were torn down for being taller than this volcano. This volcano, located on the island of Honshu, is Japan's tallest mountain.

Answer: Mount **Fuji** (accept **Fuji**yama; accept **Fuji**-sama or **Fuji**-san)

[10] Tt is theorized that the Minoan volcanic eruption may have caused the sinking of this legendary city, which Plato claimed had been sunk as punishment for trying to conquer Athens.

Answer: **Atlantis**

<RMPSS, MYTH>

This author wrote about the Vicario brother's murder of Santiago Nasar in *Chronicle of a Death Foretold*. For 10 points each,

[10] Name this Colombian author who wrote about seven generations of the Buendia family in his magic realist novel *One Hundred Years of Solitude*.

Answer: Gabriel **Garcia Marquez** (prompt on "Marquez")

[10] Tn *One Hundred Years of Solitude*, Aurelio and Amaranta's baby is born with the tail of this animal. One of these animals named Wilbur appears in EB White's novel *Charlotte's Web*.

Answer: **pig**s

[10] The baby with a pig's tail in *One Hundred Years of Solitude* is carried off by these insects. The 12th chapter of Thoreau's *Walden* is about a "Battle" of these insects.

Answer: **ant**s

<LIT, OTHER>

This god was dropped from Mount Olympus shortly after his birth because his mother was so horrified by his looks. For 10 points each,

[10] Name this Greek god of smithing who was permanently crippled by his fall from Olympus even though he was caught by a nymph.

Answer: **Hephaestus** (do not accept **Vulcan**)

[10] This nymph found and raised Hephaestus. She later gave birth to Achilles, and dipped all but his ankle in the river Styx in hopes of providing him with invincibility.

Answer: **Thetis**

[10] After he returned to Olympus, Hephaestus married this unfaithful goddess of love. Hephaestus trapped Ares and this goddess together with a golden net.

Answer: **Aphrodite** (do not accept **Venus**)

<RMPSS, MYTH>

Charles Dickens liked telling stories about orphans almost as much as Disney does. Name some of his works about orphans, for 10 points each.

[10] The title orphan of this Dickens work asks for more gruel before he is adopted by Fagin, who makes him pick pockets wtih the Artful Dodger in this novel.

Answer: **Oliver Twist**

[10] The criminal Abel Magwitch becomes the patron of the orphan boy Pip in this work. Pip eventually wins the love of Estella, Miss Havisham's ward, in this novel.

Answer: **Great Expectations**

[10] In this semi-autobiographical novel, the title orphan is taken in by his aunt, Betsey Trotwood, and falls in love with Little Em'ly and Dora Spenlow.

Answer: The Personal History, Adventures, Experience and Observation of **David Copperfield** the Younger of Blunderstone Rookery, Which He Never Meant to Publish on Any Account

<LIT, BRIT>

This network stretched from the South to Canada. For 10 points each,

[10] Name this network of safehouses whose "conductors" transported slaves to freedom.

Answer: The **Underground Railroad**

[10] This slave nicknamed "Minty" led over ten groups through the Underground Railroad. During the trip, she allegedly threatened any slaves that tried to return to the South.

Answer: Harriet **Tubman** (accept Araminta **Ross**)

[10] Another conductor on the Underground Railroad was this African-American abolitionist who wrote *My Bondage and My Freedom*.

Answer: Frederick **Douglass** (accept Frederick Augustus Washington **Bailey**)

<HIST, AMER>

This peninsula's Gold Coast includes Tijuana, just across an international border from Chula Vista, and its south includes Cabo San Lucas. For 10 points each,

[10] Name this peninsula, separated from the mainland by the Gulf of California.

Answer: **Baja California**

[10] Baja California includes two of this North American country's states. The definition of Central America begins at this country's border with Guatemala.

Answer: **Mexico**

[10] Tijuana and Chula Vista are part of an international urban area with this second-most populous California city.

Answer: **San Diego**

<GEO, GEO>

For 10 points each, give the following about the letter B in mathematics.

[10] Linear equations are often written in y equals m x plus b form; the m represents the slope of the line, while the b represents this value.

Answer: **y-intercept** (accept descriptions that describe "the y-coordinate of the point where the line crosses the y-axis" or "the y-coordinate of the line at the point where x equals 0")

[10] As it's commonly written, b is squared then subtracted by 4 times a times c in the discriminant of this formula, which will find the roots of a certain type of polynomial function.

Answer: **quadratic** formula

[10] Two times the sine of angle B times the cosine of angle B can be simplified into this single trigonometric expression, using a double angle identity.

Answer: **sine** of **two** times **B**

<SCI, OTHER>

Answer the following about some twentieth-century American artists, for 10 points each.

[10] This American realist painted the cafe scene *Chop Suey* and a brightly-lit diner on a darkened street in his work *Nighthawks*.

Answer: Edward **Hopper**

[10] This woman is considered the Mother of American Modernism. She painted many landscapes of New Mexico that often featured cow skulls.

Answer: Georgia **O'Keeffe**

[10] O'Keefe was married to Alfred Stieglitz [STEE-glitz], who worked in this artistic medium to create images like *The Steerage*, a still picture of a crowded ship created with a camera.

Answer: **photograph**y (accept equivalents such as "taking **photograph**s")

<FA, VISUAL>

This galaxy takes its name from a bright patch of light in the night sky. For 10 points each,

[10] Name this spiral galaxy, which contains our Solar System.

Answer: **Milky Way** Galaxy

[10] This spiral galaxy, the nearest large galaxy to the Milky Way, is located 2.2 million light years away and is expected to collide with the Milky Way in 5 billion years.

Answer: **Andromeda** Galaxy (accept **Messier 31**, **M31**, or **NGC 224**)

[10] The Milky Way and Andromeda are a part of this larger group of fifty-four galaxies. This group is part of the Laniakea [lah-NEE-uh-KAY-uh] Supercluster.

Answer: **Local** Group

<SCI, OTHER>

This short story first appeared in *The Sketchbook of Geoffrey Crayon*, alongside "The Legend of Sleepy Hollow." For 10 points each,

[10] Identify this short story, whose title character is perplexed by a portrait of George Washington after waking up from a twenty-year nap in the Catskills.

Answer: **Rip van Winkle**

[10] This American author wrote "The Legend of Sleepy Hollow" and "Rip van Winkle."

Answer: Washington **Irving**

[10] Washington Irving published *A History of New York* under the name of this fictional dutch historian. Irving also claimed that this historian wrote "Rip van Winkle."

Answer: Diedrich **Knickerbocker**

<LIT, AMER>

Despite their best efforts, it seems nobody can obtain peace in Europe. For 10 points each,

[10] Name this Klemens von Metternich-led conference in an Austrian city that attempted to create lasting peace in Europe during the aftermath of the Napoleonic Wars.

Answer: **Congress of Vienna**

[10] Another attempt to end conflict in Europe was this treaty which ended World War I. Unfortunately, this treaty's "war guilt" clause directly led to World War II.

Answer: Treaty of **Versailles**

[10] In line with the Treaty of Versailles, several nations united together to form this precursor to the United Nations. However, without the United States, this organization lacked any real power.

Answer: **League of Nations**

<HIST, EURO>

The symbol for an inductor resembles a coiled wire on the diagrams for these entities. For 10 points each,

[10] Name these closed loops through which electric current can flow. These paths may be arranged in series or in parallel.

Answer: **circuit**s

[10] For a parallel circuit, the equivalent amount of this quantity is found by summing the reciprocal of each component's value and then taking the reciprocal of the total. This quantity is equal to voltage divided by current according to Ohm's law.

Answer: **resistance**

[10] This generalized form of resistance is applied to alternating current circuits where it is expressed as a complex number, combining resistance with reactance.

Answer: **impedance**

<SCI, PHYS>

Answer some questions about colorful literary knights, for 10 points each.

[10] Under a spell cast by Morgan Le Fay, the Green Knight attempts to behead this man, King Arthur's nephew, in a Middle English poem.

Answer: Sir **Gawain** [GAH-wan] (be lenient with pronunciation)

[10] In this novel by Sir Walter Scott, the title knight fights for the love of Lady Rowena and is saved several times by a mysterious Black Knight, who is later revealed to be King Richard I.

Answer: **Ivanhoe**

[10] This man fights the Knight of the White Moon but is quickly vanquished. In a more famous incident, he tilts at windmills, mistaking them for giants.

Answer: Don **Quixote** de la Mancha (also accept Alonso **Quixano** de la Mancha; accept "of la Mancha" in place of "de la Mancha" in either answer)

<LIT, BRIT>

During this trial, the plaintiffs were asked to identify which dolls they found ugly. For 10 points each,

[10] Name this court case that overturned Plessy v. Ferguson and allowed the integration of schools.

Answer: **Brown v. Board** of Education of Topeka

[10] Chief Justice Earl Warren ordered the court's order to be completed at this pace. The vagueness of this order led to many schools staying segregated in the name of gradual integration.

Answer: With All **Deliberate Speed**

[10] Justice Earl Warren was also the namesake of the Warren Commission, a body that investigated this event. His investigation into this event determined that Lee Harvey Oswald acted alone.

Answer: **assassination of J**ohn Fitzgerald **Kennedy** (accept **assassination of JFK** or similar answers; prompt on "assassination of Kennedy" or similar answers)

<HIST, AMER>

This value increases when a solute is added to a solvent. For 10 points each,

[10] Give this transition value where liquid becomes a vapor. For pure water at atmospheric pressure, the temperature for this value is 100 degrees Celsius.

Answer: **boiling point**

[10] Boiling point and vapor pressure are examples of this type of property, which depends on the ratio of solute to solvent and not on the properties of the chemicals themselves.

Answer: **colligative** properties

[10] The number of particles used to calculate changes due to colligative properties is named after this Dutch scientist. His namesake factor, symbolized lowercase *i*, notes how ionic compounds dissociate in solution. Answer: Jacobus Henricus **van't Hoff** factor

<SCI, CHEM>

Dab-Dab is one of these animals in *The Story of Doctor Dolittle*. For 10 points each,

[10] Name this type of bird. In a Norwegian play, Hedvig is told to shoot one of these birds, and an "ugly" one of these turns into a swan in a Hans Christian Andersen fairy tale.

Answer: **duck**s (accept **duckling**s; accept The **Wild Duck**)

[10] This Norwegian playwright of *Ghosts* wrote *The Wild Duck*, as well as a play in which Nora Helmer is blackmailed.

Answer: Henrik **Ibsen**

[10] Henrik Ibsen wrote this play about Nora Helmer, who is blackmailed by Krogstad and eventually abandons the title home.

Answer: A **Doll's House** (accept Et **dukkehjem**)

<LIT, EURO>

For 10 points each, give the following about the "Mighty Handful."

[10] Mily Balakirev led the Mighty Handful at meetings in St Petersburg in this home nation of the Handful. Answer: **Russia**n Empire (do not accept **USSR**)

[10] This member of the Mighty Handful described the transformation of Guidon in his *The Tale of Tsar Saltan*, which includes the Flight of the Bumblebee.

Answer: Nikolai Andreyevich **Rimsky-Korsakov**

[10] This other member of the Mighty Handful was inspired by Viktor Hartmann paintings, like "The Great Gate of Kiev" and "The Hut on Fowl's Legs," for his *Pictures at an Exhibition*.

Answer: Modest Pyotrovich **Mussorgsky**

<FA, AUDIO>

This leader replaced Gaius Suetonius Paulinus, expecting his retribution against the Iceni after Boudica's revolt would be too harsh. For ten points each,

[10] Name this Roman emperor who supposedly fiddled during the Great Fire of Rome.

Answer: **Nero**

[10] Nero launched the first Roman war against these people, including the radical Zealots, in 66 CE; in that war, Vespasian invaded Galilee.

Answer: **Jew**ish people

[10] Nero's death in 68 led to this period, in which Galba, Otho, and Vitellius were unable to hold onto power. Vespasian returned from Judaea at the end of this period.

Answer: **Year of the Four Emperors** (prompt on "69 CE")

<HIST, OTHER>

This biblical figure refuses to lose his faith, even when he loses everything, saying "the Lord gave and the Lord has taken away." For 10 points each,

[10] Name this man. In his namesake book of the Bible, God tests this man's faith by destroying everything he has.

Answer: **Job**

[10] This figure challenged God to test Job's faith. This fallen angel, once called Lucifer, is also credited with tempting Eve in the Garden of Eden in the form of a serpent.

Answer: **Satan** (accept the **devil**; accept **Beelzebub**; accept ha**Satan** or **Shaitan**; accept common names such as **Prince of Darkness**)

[10] These many friends visit Job during his suffering. Noah had this number of sons, and this is the number of parts in the Christian God.

Answer: **three**

<RMPSS, REL>

Examples of this biochemical grouping include sugars. For 10 points each,

[10] Name this group of macromolecules, a major energy source for cells, whose members have a ring structure containing only carbon, hydrogen, and oxygen.

Answer: **carbohydrate** (accept any variation of **saccharide**)

[10] A common example of a carbohydrate is this sugar, also known as dextrose, with formula C6H12O6. It is found in chains as starch in plants and glycogen in animals.

Answer: **glucose**

[10] This nitrogenous derivative of glucose is found in the exoskeletons of crustaceans and in fungal cell walls. Answer: **chitin**

<SCI, BIO>

This religion's messengers of God include Moses, Jesus, Muhammad, Buddha, Krishna, and, more recently, the Bab ["bob"]. For 10 points each,

[10] Name this monotheistic religion that believes in the unity of all religions. This religion follows the Book of Certitude and was founded by Baha'u'llah [ba-HAH-oo-LAH].

Answer: **Baha'i** Faith (accept **Baha'i**ism)

[10] The founder of the Baha'i Faith, Baha'u'llah, was born in this modern middle eastern nation, once known as Persia.

Answer: Islamic Republic of **Iran**

[10] Baha'i defines this concept as the condition of being close to God in the afterlife. This happy version of the afterlife is sometimes portrayed as being in the clouds and full of angels.

Answer: **heaven** (accept **paradise**)

<RMPSS, REL>

For 10 points each, answer the following about stone constructions in China.

[10] This defensive fortification, built to protect China from Mongol invasion, isn't really visible from space.

Answer: **Great Wall** of China

[10] The emperor Qin Shi Huangdi [chin shee hoo-ong dee] had this collection of thousands of clay sculptures built and buried with him.

Answer: **Terracotta Army** (prompt on "army")

[10] The Songyue Monastery is home to the oldest stone one of these multi-tiered towers, used for worship in Taoist and Buddhist traditions.

Answer: **pagoda** (do not accept "stupa")

<HIST, WORLD>

Lady and Ghost are "dire" ones of these animals that appear in *A Song of Ice and Fire*. For 10 points each,

[10] Name these wild animals. In a story by the Grimm brothers, one of these animals destroys the homes of three little pigs.

Answer: **wolves** (accept **wolf**; accept **canis lupus** lupus)

[10] Natty Bumppo is called a "wolf in the skin of a dog" in this second novel in James Fenimore Cooper's *Leat ersto ing ales*. This novel is named for Chingachgook, the final member of a Native American tribe.

Answer: The **Last of the Mohicans**

[10] Ulrich von Gradwitz and Georg Znaeym [GA -org ZN M] are trapped under a fallen tree and resolve their differences, only to be terrorized by the title wolves, in what short story by Saki?

Answer: The **Interlopers**

<LIT, OTHER>

In August 2015, researchers at the University of Washington found just the fifteenth in a series of these pictures. For 10 points each,

[10] Give this term for periodically repeating tilings of the plane using shapes that do not overlap or leave gaps. Answer: **tessellation** (accept word forms like **tesselate**)

[10] Tessellations involving triangles, squares, or hexagons are easy; the Washington researchers' fifteenth tessellation uses these five-sided polygons.

Answer: **pentagon**

[10] You cannot tile the plane with regular pentagons because this number, the measure of each of the internal angles of a regular pentagon, is not a divisor of 360.

Answer: **108** degrees

<SCI, OTHER>

This type of dance employs graceful movements such as *arabesq es* and *piro ettes*. For ten points each,

[10] Name this performance dance style that includes the Shaker-hymn-inspired *Appala ian Spring* and cowboy-influenced *Rodeo* [roh-DA -oh]. Its performers often wear tutus.

Answer: **ballet**

[10] This woman choreographed *Appala ian Spring* and taught a style of dancing focusing on spirals and "contraction and release."

Answer: Martha **Graham**

[10] This American composer wrote the music for *Appala ian Spring* and *Rodeo*, as well as a *Fan are or t e Common Man*.

Answer: Aaron **Copland**

<FA, OTHER>

In this novel the "tall soldier," Jim Conklin, is in the 304th regiment with the protagonist. For 10 points each,

[10] Name this Stephen Crane novel about Henry Fleming, a Union soldier who feels guilty for not taking care of the "tattered man" after fleeing from battle.

Answer: The **Red Badge of Courage**

[10] *e Red Badge o Co rage* takes place during this war. Peyton Farquhar, the protagonist of Ambrose Bierce's "An ccurrence at wl Creek Bridge," is hung for helping the Confederates during this war. Answer: The United States **Civil War** (accept **War Between the States**)

[10] In this Stephen Crane short story, the Captain, Cook, Correspondent, and iler all survive a shipwreck, but become stranded at sea in the title vessel.

Answer: The **Open Boat**

<HIST, AMER>

Postmodern Jukebox takes modern songs, and performs them as if they were written in another era. Name some songs that they have covered, for 10 points each.

[10] Postmodern Jukebox covered this Carly Rae Jepsen song in ragtime style. The lines "Hey, I just met you / And this is crazy / But here's my number" precede the title phrase of this song.

Answer: **Call Me Maybe**

[10] PMJ used New Orleans jazz dirge style to cover "Sweet Child ' Mine," a song by this band, who also sang "Welcome to the Jungle."

Answer: **Guns 'n Roses**

[10] Several PMJ songs were included in the game *Bios o ln inite*, including a cover of this Tears for Fears song, in which "Everybody Wants to" do the title action.

Answer: Everybody Wants to **Rule the World**

<TRASH, POP CULT>

This document opens its preamble with the words "We the People." For 10 points each,

[10] Name this document that was created in 1787 to replace the Articles of Confederation.

Answer: United States **Constitution**

[10] The ratifying of the Constitution was supported by this series of essays written by John Jay, James Madison, and Alexander Hamilton.

Answer: The **Federalist** Papers

[10] pposition to the Constitution was led by this Virginian politician who famously claimed "give me liberty or give me death!"

Answer: Patrick **Henry**

<HIST, AMER>

This system of the body can be divided into the peripheral and central components. For 10 points each,

[10] Name this system that initiates movement by transmitting signals to the muscles. It includes the brain and spinal cord.

Answer: **nervous** system

[10] Each nerve cell consists of multiple dendrites that lead to a soma which passes signals to this long, slender fiber. This section of a neuron is often studied in squid where it can be 1 millimeter thick.

Answer: **axon**

[10] Also called a nerve impulse, these events transmit signals down neurons by rapidly moving ions, thereby causing a change in voltage across the cell's membrane.

Answer: **action potential**s

<SCI, BIO>

This city's effective mayor, Carlos Lacerda, was the target of an assassination attempt on its Rua Tonelero. For ten points each,

[10] Name this former capital of Brazil, the second largest city in Brazil after Sao Paulo.

Answer: **Rio** de Janeiro

[10] The Rua Tonelero is in this wealthy Rio neighborhood, famous for its 2.5 mile long beach.

Answer: **Copacabana**

[10] In contrast to the wealth of Copacabana, Rio contains many of these quickly-growing slums, often found on hillsides.

Answer: **favela**s

<GEO, GEO>

Archaeologists still debate whether the pulley or this device was more important in constructing the pyramids of Giza. For 10 points each,

[10] Name this simple machine, also called a ramp, that decreases the force needed to lift an object by moving it over a greater distance.

Answer: **inclined plane**

[10] Dividing the weight of an object by the force needed to move it up an inclined plane yields this quantity, a measure of how well a machine enhances the performance of its user. In general, this quantity is the ratio of resistance force to effort force.

Answer: ideal **mechanical advantage**

[10] Dividing actual mechanical advantage by ideal mechanical advantage gives this quantity, the percentage of input work available for output. The hypothetical Carnot [kar-N H] engine approaches 100% for this quantity.

Answer: **efficiency**

<SCI, PHYS>

Mimir's well of wisdom lies below this tree. For 10 points each,

[10] Name this Norse "world tree," from which din hung for nine days and nights.

Answer: **Yggdrasil**

[10] In Norse myth, ggdrasil [IG-drah-zill] will be one of the only things to survive Ragnarok, also known as "the twilight of the gods." Ragnarok is this type of event, similar to the Christian apocalypse.

Answer: **end of the world** (accept other descriptions like **end time**s)

[10] Ragnarok will come about because of a war between the Norse gods and these creatures, led by Loki. Angrboda, a wife of Loki, was one of these strong creatures.

Answer: **Jotunn** (accept **jotnar**; accept frost **giant**s)

<RMPSS, MYTH>

Answer the following about Shakespeare's poetry, for 10 points each.

[10] Shakespeare's name is sometimes given to the "Elizabethan" style of these poems; that style is contrasted with the Italian style named for Petrarch. These poems have fourteen lines.

Answer: **sonnet**s (accept Elizabethan or Shakespearean **sonnet**s; accept Italian or Petrarchan **sonnet**s)

[10] ne of Shakespeare's sonnets asks if the speaker could "compare thee" to a day in this season, saying "thou art more lovely and more temperate."

Answer: **summer** (accept Shall I Compare Thee to a **Summer**'s Day?)

[10] "Shall I Compare Thee to a Summer's Day" is addressed to a "Fair outh," but another group of Shakespeare's sonnets were written for this black-haired woman, whose identity remains a mystery.

Answer: the **Dark Lady** (prompt on an incomplete answer, such as "Lady" alone)

<LIT, BRIT>

These substances are so named because they entirely disassociate within a solvent and produce a pH below

7. For 10 points each,

[10] Name this class of acids that lose all of their hydrogen ions, making them more effective than their weak counterparts.

Answer: **strong** acids

[10] ne example of a strong acid is this one produced in the contact process that is used in lead-acid batteries.

Answer: **sulfuric acid**

[10] Sulfuric acid has this property, giving its titration curve two areas of leveling-off. This property means that an acid has two hydrogens that can be ionized.

Answer: **diprotic**

<SCI, CHEM>

This event increased tensions that had been diminished due to the Peace of Saint-Germain-en-Laye. For 10 points each,

[10] Name this event that began with the assassination of Gaspard de Coligny. This event, named for an apostle, was a series of attacks on Huguenots by Catholic mobs.

Answer: **St. Bartholomew's Day Massacre** (accept **Massacre de la Saint-Barthelemy**)

[10] Catherine, the queen mother at the time of the St. Bartholomew's Day Massacre, was a member of this family. Leaders of this Italian banking family included Lorenzo the Magnificent.

Answer: de **Medici**s

[10] The Medici family were native to this Italian city, where they held major influence. After attempting to kill Lorenzo, the Pazzi family were exiled from this city.

Answer: **Florence**

<HIST, EURO>

Robert Lebrun falls in love with the protagonist of this novel. For 10 points each,

[10] Name this novel, in which Edna Pontellier cheats on Leonce with Alcee Arobin after returning from her vacation to Grand Isle.

Answer: The **Awakening**

[10] *e Awa ening* was written by this Louisiana author of "The Storm" and "Desiree's Baby." Answer: Kate **Chopin** (accept Katherine **O'Flaherty**)

[10] In *The Awakening*, Edna carries out this action by swimming out into the Gulf of Mexico. Virginia Woolf performed this action by filling her pockets with stones and walking into the River use.

Answer: **suicide** (accept descriptions like **kill**ing one**self**; accept **drown**ing)

<LIT, AMER>

This painting's subject looks out at the viewer from a black backdrop and wears a white-collared golden dress. For 10 points each,

[10] Name this painting of a young woman, who wears a blue and yellow headdress. This work is titled after the shining white piece of jewelry that hangs down to the subject's collar.

Answer: **Girl with a Pearl Earring**

[10] This painter created *Girl Wit a Pearl Earring* and a misty painting of his hometown, *View o Del t*. Answer: Johannes **Vermeer** (accept Jan or Johan **Vermeer**)

[10] Vermeer was a painter from this northern European nation with capital at Amsterdam. Answer: Kingdom of the **Netherlands** (accept **Dutch** Republic)

<FA, VISUAL>

This politician wrote a book with the chapters "Disaster deferred" and "The power to pollute" which examined the Chevrolet Corvair. For 10 points, each,

[10] Name this Lebanese-American who wrote *Unsa e at Any Speed*, a perennial presidential candidate.

Answer: Ralph **Nader**

[10] Ralph Nader's 1996 and 2000 President campaigns were as a candidate for this party. This party, named for their focus on environmentalism, has representation in over 30 states.

Answer: **Green** Party of the United States

[10] Ralph Nader was accused of "spoiling" the 2000 Presidential Election for this Democratic candidate, a former-vice president who lost to George W. Bush.

Answer: Albert Arnold **Gore**, Jr. (accept **Al Gore**)

<HIST, AMER>

These vortexes commonly touch down in their namesake "alley" in the central US. For 10 points each,

[10] Name these rotating columns of air that are rated using the enhanced Fujita scale.

Answer: **tornado**es

[10] Tornadoes are spawned by these rotating thunderstorms that produce a "hook echo" on radar. Answer: **supercell**s (accept **mesocyclone**s)

[10] When tornados pass over a sea or lake they become this type of vortex that may cause fish to rain down from the sky.

Answer: **waterspout**

<SCI, OTHER>

Sparta has a long history with the rest of Greece. For 10 points each,

[10] Name this leader of the Delian League, the current capital of Greece and a long-time rival of Sparta. Despite being known for its navy, this city still lost the Battle of Aegospotami [EE-juh-SPAH-tah-mee].

Answer: **Athens**

[10] The Battle of Aegospotami ended this series of wars, which was named for a league led by Sparta. This war was temporarily ended with the Peace of Nicias [NIH-kee-as].

Answer: **Peloponnesian** War

[10] Before the Peloponnesian War, Sparta had defended all of Greece, including Athens, by fighting this battle. During this battle, three hundred Spartans legendarily held out against Persian forces.

Answer: Battle of **Thermopylae**

<HIST, WORLD>

This painting is named for its background, which shows a white farmhouse with a strangely ornate window. For 10 points each,

[10] Name this painting, which shows the artist's sister and dentist posing as two Iowa farmers: a grim-faced, apron-wearing woman and a man in overalls holding a pitchfork.

Answer: **American Gothic**

[10] This American Regionalist painted created *American Gothic*.

Answer: Grant DeVolson **Wood**

[10] The title figure of this Grant Wood painting draws back the curtain to reveal a young George Washington admitting to having cut down a cherry tree.

Answer: **Parson Weems' Fable**

<FA, VISUAL>

For three decades, the Free Aceh [AH-chay] Movement campaigned for independence of a province on this island. For ten points each,

[10] Name this island containing the cities of Medan and Palembang. A massive 2004 earthquake off its west coast caused the Boxing Day tsunami.

Answer: **Sumatra**

[10] Sumatra is an island in this country with capital Jakarta. This country is home to the highest population of any Muslim-majority nation, and shares the island of Kalimantan with Malaysia and Brunei.

Answer: Republic of **Indonesia**

[10] Though Malaysia itself has a few islands, its capital, Kuala Lumpur, is on a Southeast Asian mainland peninsula, on which Malaysia borders this country, formerly known as Siam.

Answer: Kingdom of **Thailand**

<GEO, GEO>

This synthetic fabric was rationed during World War II because of its use in ropes, tires, and parachutes. For 10 points each,

[10] Name this material, introduced at the 1939 New York World's Fair as artificial silk. In the 1940s it became synonymous with women's stockings.

Answer: **Nylon**

[10] Nylon is a synthetic example of this type of chemical, which is built from multiple subunits that repeat as one longer chain.

Answer: **polymer**

[10] This chemical company's research led to the development of Nylon. This company also developed neoprene and Teflon.

Answer: EI **du Pont** de Nemours and Company

<MISC., MISC.>

This poem begins "Ah broken is the golden bowl! the spirit flown forever! Let the bell toll!" For 10 points each,

[10] Name this Edgar Allan Poe poem named for a title woman, who has "death upon her eyes." In another of Poe's poems, this woman is the speaker's lost love, whom he will meet "nevermore."

Answer: **Lenore**

[10] Lenore also appears in this poem, in which the title bird "perches on a bust of Pallas" and repeatedly cries "Nevermore."

Answer: The **Raven**

[10] "The wind came out of the cloud by night, / Chilling and killing" the title woman in this Poe poem, which begins "many and many a year ago, / in a kingdom by the sea."

Answer: **Annabel Lee**

<LIT, AMER>

This actor played the title villain in *The Man with the Golden Gun* and acted in numerous Hammer films. For 10 points each,

[10] Name this actor who portrayed Saruman in *Lord of the Rings* and Count Dooku in *Star Wars*. He passed away due to heart failure in June 2015.

Answer: Sir Christopher Frank Carandini **Lee**

[10] Lee portrayed the Mummy and Frankenstein's monster, as well as this legendary vampire. Bela Lugosi also played this monster, who titles a namesake book by Bram Stoker.

Answer: Count **Dracula**

[10] This other vampire appeared in a 1922 F.W. Murnau film, in which Count Orlok is really this title creature. Answer: **Nosferatu**: A Symphony of Horror

<TRASH, POP CULT>

This man observed a Doppler redshift, suggesting that galaxies are moving away from each other. For 10 points each,

[10] Name this scientist, whose namesake space telescope was launched in 1990.

Answer: Edwin Powell **Hubble**

[10] Hubble's observation of redshift supports this cosmological model. In this model, the universe rapidly grew from a single point during a namesake "explosion."

Answer: **Big Bang**

[10] First observed by Penzias and Wilson at Bell Labs, this residual radiation fills the universe and is derived from blackbody radiation that arose shortly after the Big Bang.

Answer: **C**osmic **M**icrowave **B**ackground Radiation (accept **CBR**)

<SCI, PHYS>

This novel's title character meets Helen Burns at Mr. Brocklehurst's Lowood School. For 10 points each,

[10] Identify this Charlotte Bronte novel, in which Bertha Mason burns down Thornfield Hall, blinding the title character's love interest.

Answer: **Jane Eyre**

[10] This character is blinded trying to save Bertha Mason during the Thornfield Hall fire. Jane Eyre marries this character at the end of the novel.

Answer: **Edward Rochester** (accept either underlined name)

[10] This Jean Rhys novel is a prequel to *Jane Eyre*. It follows the story of Jamaican heiress Antoinette Cosway, whose name is changed to Bertha Mason when Rochester takes her back to England.

Answer: **Wide Sargasso Sea**

<LIT, BRIT>

Plants and algae fulfill this role in the ecosystem. For 10 points each,

[10] Name this term, from the Greek for "self-feeding", that refers to primary producers capable of generating their own nutrient source.

Answer: **autotroph**s

[10] Autotrophs make up the lowest level of this hierarchy, that has different trophic levels and multiple paths connecting producers to consumers.

Answer: **food web**

[10] In ecology, food webs can be depicted as trophic pyramids because of a rule stating that this percent of available energy can be transferred from one level to the next.

Answer: **ten** percent

<SCI, BIO>

This mountain range stretches from Southeastern Canada to Alabama. For 10 points each,

[10] Name this mountain range which separated the Thirteen Colonies from "Indian Reserve."

Answer: **Appalachian** Mountains

[10] This proclamation set the Appalachian Mountains as the boundary for the Thirteen Colonies. However, despite this proclamation the colonies expanded westward anyway.

Answer: Proclamation of **1763**

[10] The Proclamation of 1763 was issued by the British King who ruled during the American Revolutionary War.

Answer: **George III**

<HIST, AMER>

In the short story "Everything That Rises Must Converge," Julian takes his mother to a weight loss class at his local branch of this institution. For 10 points each,

[10] Name this institution, where the Village People say it is fun to stay. Answer: **Y**oung **M**en's **C**hristian **A**ssociation (accept The **Y**)

[10] This American author of "Everything that Rises Must Converge" wrote about Bailey's family being murdered in "A Good Man is Hard to Find."

Answer: Mary Flannery **O'Connor**

[10] Flannery O'Connor was a member of the "Southern" version of this literary genre. Horace Walpole's *The Castle of Otranto* is an early novel in this florid literary genre.

Answer: **Gothic** (accept **Southern Gothic**)

<LIT, AMER>

Large marching bands use drum majors to assist this person, often called "maestro" by the members of the orchestra. For 10 points each,

[10] Name this leader of a band or orchestra, who directs the tempo and other aspects of the music, sometimes with a baton.

Answer: **conductor** (prompt on director)

[10] This composer of *West Side Story* conducted the New York Philharmonic for a long-running series of educational, televised "Young People's Concerts."

Answer: Leonard **Bernstein**

[10] This Massachusetts-based orchestra plays primarily popular classical music. It was led for nearly fifty years by Arthur Fiedler and then for over a decade by movie music master John Williams.

Answer: **Boston Pops** Orchestra (prompt on "Boston;" do not accept "Boston Symphony Orchestra")

<FA, AUDIO>

In 2013, University of New Hampshire professor Yitang Zhang published a landmark proof regarding the gaps between these numbers. For 10 points each,

[10] Give this term for positive integers that are only divisible by themselves and one.

Answer: **prime** numbers

[10] Zhang's work suggests that we may soon prove the statement "there are an infinite number of twin primes." That statement is believed to be true, but no proof yet exists; therefore, it is this type of mathematical statement.

Answer: twin prime **conjecture**

[10] A pair of prime numbers are called "twins" if they differ by this value. There is only one triplet of prime numbers with equal gaps of this size.

Answer: **two** (note: that triplet is 3, 5, 7; any set of three larger consecutive odd numbers includes a composite number divisible by three)

<SCI, OTHER>

After Martin Seligman administered these to dogs, the dogs developed a condition called "learned helplessness." For 10 points each,

[10] Identify this technique often used to treat bipolar disorder and major depression, in which an electric current is passed through the brain.

Answer: electric **shock**s (accept **electroconvulsive** therapy or **ECT**; accept **electroshock** therapy)

[10] In this American psychologist's "obedience to authority" experiment at Yale, participants were told to give increasingly intense electric shocks to a group of "learners" to test how long they would follow orders.

Answer: Stanley **Milgram**

[10] In another Milgram experiment, Milgram found that people were more likely to provide aid when they found one of these objects addressed to an individual or an organization than they were if these objects were addressed to "Friends of the Nazi Party."

Answer: **lost letter**s experiment (accept descriptions, such as **lost mail**)

<RMPSS, SOC SCI>

Ancient Greek myths were not kind to misbehavers. Answer the following about some particularly harsh punishments in the underworld, for 10 points each.

[10] This was the name given to the Greek underworld, as well as to its ruler, a brother of Zeus.

Answer: **Hades**

[10] This king kept the god Hades prisoner in an attempt to avoid death. As punishment, he was forced to roll a boulder up a hill over and over, only to have it roll back down the other side.

Answer: **Sisyphus**

[10] As punishment for serving the gods his son, Pelops, this man is forced to stand neck deep in a lake with a fruit tree above him, but is unable to eat or drink. His name has come to mean "temptation."

Answer: **Tantalus**

<RMPSS, MYTH>

No fictitious forces appear in reference frames named for this property. For 10 points each,

[10] Name this tendency of an object to remain in uniform motion until it is acted on by an outside force. Answer: **inertia** (accept **inertial reference frames**)

[10] This English scientist described inertia in the first of his three laws of motion. He also invented calculus independently of Leibniz.

Answer: Isaac **Newton**

[10] This law formulated by Newton states that the rate of change of an object's temperature is proportional to the difference between its current temperature and the surrounding temperature.

Answer: Newton's Law of **Cooling**

<SCI, PHYS>

One branch of the Christian Reformation rebelled against the use of these papers, which were sold by Johann Tetzel. For 10 points each,

[10] Name these papers, which could be purchased to grant temporal relief from minor sins. Martin Luther's *Ninety-Five Theses* debated the value of these papers.

Answer: **indulgence**s

[10] Like Martin Luther, this Frenchman led a religious split from the Catholic church. This man founded a namesake "Reformed" church in Geneva.

Answer: John **Calvin** (accept Jean **Calvin**; accept Jehan **Cauvin**)

[10] John Calvin and Martin Luther founded religions in this major branch of Christianity, which isn't Orthodoxy or Catholicism.

Answer: **Protestant**ism

<HIST, EURO>

After this event, Max Blanck and Isaac Harris were tried for murder. For 10 points each,

[10] Name this event, in which the Asch building was set ablaze. During this event, many garment workers were unable to escape because the exterior doors were locked.

Answer: **Triangle Shirtwaist** Factory **Fire**

[10] Rose Schneiderman, a member of this ideology, advocated for a "strong, working-class movement," in the aftermath of the Triangle Shirtwaist fire. This ideology supports workers' ownership of production.

Answer: **socialism** (accept word forms like **socialist**s; do not accept "communism")

[10] Rose Schneiderman gave her speech in the Metropolitan Opera House in this city. The Triangle Shirtwaist Fire took place in this city's Greenwich Village.

Answer: **New York** City

<HIST, AMER>

Two of these creatures, Gargantua and Pantagruel, appear in stories by a French author. For 10 points each,

[10] Name these extremely large, humanoid creatures. In one story, a beanstalk takes Jack to the home of one of these huge creatures who goes "Fee-fi-fo-fum."

Answer: **giant**s

[10] This Frenchman, who used the pseudonym Alcofribas Nasier, wrote *Gargantua and Pantagruel*. His last words were "I go to seek a Great Perhaps."

Answer: François **Rabelais**

[10] In this author's first novel, *Looking for Alaska*, Miles Halter uses Francois Rabelais's last words as motivation at Culver Creek Preparatory School. He also wrote *Paper Towns*.

Answer: John **Green**

<LIT, EURO>

This man created a wooden bull that led to the birth of a cow-headed monster. For 10 points each,

[10] Name this inventor, who built the Labyrinth in which he and his son, Tcarus, were imprisoned.

Answer: **Daedalus**

[10] Daedalus was imprisoned for building the wooden bull that allowed Pasiphae, the wife of this Cretan king, to conceive the half-cow Minotaur.

Answer: King **Minos**

[10] Daedalus escaped his imprisonment by building two sets of these objects. Unfortunately, his son's set of these fell apart when he went too close to the sun.

Answer: **wing**s

<RMPSS, MYTH>

A break-in was discovered at this location after Frank Wills noticed duct tape blocking a door's latch. For 10 points each,

[10] Name this hotel, where five people attempted to wiretap the headquarters of the Democratic National Committee.

Answer: **Watergate** Hotel and Office Building

[10] This organization caused the Watergate break-in to become a full-fledged scandal after they paid for the burglars' legal fees. This organization was created to help a certain man win the election of 1972.

Answer: **Committee to Reelect the President** (accept **CREEP** or **CRP**)

[10] The Watergate scandal caused the resignation of this president, who was later controversially pardoned by his former vice president, Gerald Ford.

Answer: Richard Milhous **Nixon**

<HIST, AMER>

Answer the following about Jewish holidays, for 10 points each.

[10] Mishloach Manot [meesh-loh-ock ma-noht] are sent to celebrate this holiday, which commemorates the "casting of lots" and the story of Esther.

Answer: **Purim**

[10] The *Kol Nidre* ["coal" NEE-drey] prayer is recited during this holiday, which completes the High Holy Days begun by Rosh Hashanah. This holiday is also called the Day of Atonement.

Answer: **Yom Kippur**

[10] This winter holiday celebrates how the oil of the Maccabees lasted for eight nights instead of one. On each night of this holiday, a new candle is lit on a namesake, menorah-like candle holder.

Answer: **Hanukkah** (accept **Festival of Lights**)

<RMPSS, REL>

Edward FitzGerald translated over a hundred of this man's poems, including one whose speaker desires only "a Jug of Wine, a Loaf of Bread, and Thou." For 10 points each,

[10] Name this Persian author who wrote about a "moving finger that writes, and / having writ, moves on" in a namesake collection of *Rubaiyat*.

Answer: (Ghiyath ad-Din Abul-Fath) Omar (ibn Tbrahim al-)**Khayyam** (Nishapuri)

[10] The *Rubaiyat* of Omar Khayyam is a collection of this type of poem, which have four lines each.

Answer: **quatrain**

[10] Khayyam's poetry inspired the title of this woman's *The Moving Finger*, a novel about her character Miss Marple. This English mystery writer also wrote the long-running play *The Mousetrap*.

Answer: Dame Agatha (Mary Clarissa Miller) **Christie** (do not accept Mary Westmacott)

<LIT, OTHER>

Airplanes routinely take advantage of this phenomenon to reduce their fuel consumption. For 10 points each,

[10] Name this fast-moving current of air, found between five and ten miles above sea level, that pushes storms and other weather systems across North America.

Answer: polar **jet stream**

[10] The jet stream consists mainly of "westerly" winds, meaning that it pushes weather fronts in this direction. Answer: **east** (accept descriptions like "it travels from **west to east**")

[10] The jet stream is typically located where this layer of the atmosphere meets the stratosphere above it. This layer of the atmosphere contains all of Earth's weather.

Answer: **troposphere**

<SCI, OTHER>

The base-ten type of this function is commonly called "common;" when applied to one thousand, that function gives three. For 10 points each,

[10] Name this type of function, the inverse of exponential functions. Their "natural" type is often written in shorthand as "ln."

Answer: **log**arithms (accept word forms, like **log**arithmic functions)

[10] Logarithms are used to calculate this quantity, the amount of time it takes a radioactive substance to decay to 50% of its original amount.

Answer: **half-life**

[10] Simplify the log of two plus the log of three, giving your answer in logarithmic form. Answer: **log**arithm of **six**

<SCI, OTHER>

This empire developed out of the Eastern Roman Empire. For 10 points each,

[10] Name this empire that, despite employing generals like Belisarius, was conquered by the Ottoman Empire. After the fall of this empire, its capital was renamed Istanbul.

Answer: **Byzantine** Empire

[10] This Byzantine Emperor tasked Belisarius with reconquering the Mediterranean, and this husband of Theodora was targeted in the Nika Riots.

Answer: **Justinian I** (accept **Justinian the Great**; prompt on "Justinian")

[10] Justinian names one of these epidemics which killed over fifty million people. However, his event pales in comparison to a "bubonic" one of these.

Answer: **plague**s (prompt on answers like "illness")

<HIST, WORLD>

For 10 points each, answer the following about operas set in Africa.

[10] This composer wrote the aria "Svegliatevi nel core" [sVAY-glee-ah-TAY-vee nell KOH-ray] for the character of Pompey's son, Sesto, in his opera *Julius Caesar in Egypt*. He is more famous for *Water Music* and the oratorio *Messiah*.

Answer:George Frideric **Handel**

[10] This Verdi opera is also set in Egypt, where the general Radames vows to escape with the title Ethiopia captive, who sings "O terra, addio" as she dies.

Answer: **Aida**

[10] This composer wrote "When I am Laid in Earth" for an opera set in Carthage, *Dido and Aeneas*. Answer: Henry **Purcell**

<FA, AUDIO>

The protagonist of this play has "always depended on the kindness of strangers." For 10 points each,

[10] Name this play, in which Blanche Dubois travels to New Orleans to visit her sister and her brother-in-law.

Answer: A **Streetcar Named Desire**

[10] This woman, the sister of Blanche Dubois, has a violent but passionate relationship with her husband, Stanley.

Answer: **Stella** Kowalski (prompt on "Kowalski")

[10] This American author wrote *A Streetcar Named Desire*. A glass unicorn is broken while Laura Wingfield and Jim O'Connor dance in this man's play *The Glass Menagerie*.

Answer: Thomas Lanier "Tennessee" **Williams** TTT

<LIT, AMER>

A twenty-hour ferry ride will take you from Devonport, in this country's southernmost state, through Port Philip to the city of Melbourne. For ten points each,

[10] Name this Southern Hemisphere island country, founded as a British penal colony, whose capital is Canberra.

Answer: **Australia**

[10] This southern-most Australian state was formerly known as Van Diemen's Land, and is separated from the mainland by the Bass Strait.

Answer: **Tasmania**

[10] The capital of Tasmania is this seaport city, home to Mount Wellington. Answer: **Hobart**

<GEO, GEO>

This book claims that governments will always borrow money to fund a war, and it uses a pin factory to demonstrate the necessity for division of labor. For 10 points each,

[10] Name this book by economist Adam Smith, one of the earliest works that examines the manners in which countries achieved prosperity.

Answer: An Tnquiry Tnto the Nature and Causes of the **Wealth of Nations**

[10] Adam Smith was an economist from this European nation, which was also the homeland of philosopher David Hume. Due in part to economic concerns, this island nation voted to remain a part of the United Kingdom in 2014.

Answer: **Scotland** (accept **Alba**)

[10] Tn *The Wealth of Nations*, Smith argues that this metaphorical object, which represents a natural economic flow, will guide the markets better than individual meddling.

Answer: **Invisible Hand**

<RMPSS, SOC SCI>

This theory was greatly bolstered in 2012 by the discovery of the Higgs boson within the Large Hadron Collider. For 10 points each,

[10] Identify this highly successful model of particle physics. This model incorporates twelve fermions and four gauge bosons, but it cannot fully explain gravity or the nature of dark matter.

Answer: **Standard** Model of particle physics

[10] Ordinary matter, as described by the Standard Model, consists of leptons and this other group of fermions that have flavors like "top," "charm," and "strange." A proton contains two "up" and one "down" type of this particle.

Answer: **quark**s

[10] The quarks that form a proton are held together by this fundamental force, which is carried by gluons. Answer: **strong** nuclear force

<SCI, PHYS>

In this work, subtitled *Mutiny of the Hispaniola*, Billy Bones leaves his sea chest to a young boy. For 10 points each,

[10] Name this adventure novel by Robert Louis Stevenson, in which Jim Hawkins travels to find pirate treasure.

Answer: **Treasure Island**; or, The Mutiny of the Hispaniola

[10] This ship captain pays Squire Trelawney to hire sailors to help him find the treasure. He ends up with a boatload of pirates who mutiny against this man.

Answer: Captain Alexander **Smollett**

[10] This peg-legged, parrot-toting cook on Smollett's ship leads the mutiny to claim the treasure. Answer: Long John **SIlver**

<LIT, BRIT>

For 10 points each, identify the following characters that appear in Super Smash Brothers 4.

[10] Along with his brother Luigi, this Ttalian plumber returns to the fight in Smash 4. He can use his cape to reflect projectiles, and use the F.L.U.D.D. to push opponents away from him.

Answer: **Mario**

[10] This black-and-white character's side special causes him to swing a hammer with a randomly generated number displayed above. His neutral special involves him flipping food out of a frying pan at opponents.

Answer: Mr **Game & Watch**

[10] Like Falco, this character's final smash is the Landmaster. This character is told to "do a barrel roll!" by Peppy Hare in his eponymous series.

Answer: Star **Fox**

<TRASH, POP CULT>

This President's first term included a vicious national debate over the Missouri Compromise and the eventual collapse of the American economy so, naturally, it's described as the "Era of Good Feelings." For 10 points each,

[10] Name this fifth US President, whose re-election was such a foregone conclusion that his party didn't even bother formally nominating him for the ticket in 1820.

Answer: James **Monroe**

[10] This political party was nearly dead by 1820; they didn't nominate a Presidential candidate, so Monroe ran unopposed. Rufus King ran for this party in 1816.

Answer: **Federalist** Party

[10] Monroe was the third of four consecutive Presidents from this early American political party. Tt was led by Thomas Jefferson in opposition to the Federalists.

Answer: **Democratic-Republican** Party ( accept **Jeffersonian Republican** Party; do not prompt on partial answer)

<HIST, AMER>

Peptides and steroids are examples of these signaling molecules. For 10 points each,

[10] Name this group of messenger molecules released by the endocrine system to regulate metabolism, kidney function, and pregnancy.

Answer: **hormone**s

[10] Known as the "master gland," this pea-sized gland at the base of the brain is responsible for producing human growth hormone and prolactin.

Answer: **pituitary** gland (accept **hypophysis**)

[10] The pituitary gland controls hormone release through this process which shuts off production of hormones when the body reaches equilibrium. Homeostasis works mainly through this type of loop.

Answer: **negative feedback** loops

<SCI, BIO>

This man fought his emotions while announcing the failure of a national merger. For 10 points each,

[10] Name this founding father of an Asian city-state that became independent from Malaysia in 1965. This leader passed away in March 2015.

Answer: **Lee** Kuan Yew

[10] Lee Kuan Yew was the first Prime Minister of this Asian city-state. Tts booming economy and population of less than six million people gives this city the second-highest GDP per capita of any Asian country.

Answer: Republic of **Singapore**

[10] Lee Kuan Yew supported corporal punishment, usually given in this form in schools and prisons. Preston Brooks used this specific attack on Charles Sumner in the House of Representatives in 1856.

Answer: **caning** (accept descriptions like "using a **cane** to **beat** someone;" prompt on "beating" or similar answers)

<HIST, WORLD>

Compounds exhibiting this property are represented by Lewis diagrams with double-headed arrows between them. For 10 points each,

[10] Name this property, in which multiple structures represent the same molecule. The resulting bond lengths will be intermediate because of delocalized electrons.

Answer: **resonance** (accept **mesomerism**)

[10] One molecule that exhibits resonance is this anion found in both fertilizers and gunpowder. An excess of this ion in agricultural runoff is a common cause of algae blooms.

Answer: **nitrate** (accept **NO -** ["N-O-3-minus"])

[10] Resonant compounds generally adhere to this principle, which demands eight valence electrons for each atom. Because noble gases already satisfy this principle, they do not easily bond.

Answer: **octet rule**

<SCI, CHEM>

For 10 points each, name the following short stories that feature diabolical plot twists.

[10] Tn this Guy de Maupassant short story, Mathilde works for years to pay for a replacement after she loses the title piece of jewelry, but finds out too late that Madame Forestier's [foh-REH-stee-AY's] jewelry had been fake.

Answer: The Diamond **Necklace** (accept La **Parure**)

[10] Tn this W. W. Jacobs short story, Mr White uses the title appendage to wish for money, but his son is killed in the process. When he wishes again for his son to return from the dead, he gets a horrific result.

Answer: The **Monkey's Paw**

[10] In this short story by Richard Connell, Rainsford discovers that the only prey that challenges General Zaroff on his hunts is humans.

Answer: The **Most Dangerous Game** (accept The **Hounds of Zaroff**)

<LIT, OTHER>

For 10 points each, answer the following about *The School of Athens*, a painting that shows great thinkers like Plato and Aristotle speaking together in a vaulted room.

[10] *The School of Athens* is a work by this Ttalian Renaissance artist of *La Disputa*.

Answer: **Raphael**lo Sanzio da Urbino

[10] *The School of Athens* is on a wall in the "Raphael Rooms" of the Apostolic Palace, which is found in this tiny nation, the home of the Pope.

Answer: **Vatican** City (State) (accept Stato della Citta del **Vaticano**; accept Status Civitatis **Vaticanae**)

[10] *The School of Athens* is one of several paintings in the Raphael Rooms that were created using this technique. This style involves painting a mural directly onto wet plaster.

Answer: **fresco**

<FA, VISUAL>