



1. In Bengali, this form is derived by adding the suffix -te to the verb stem, as in "korte." Hebrew has two versions of this form, the "absolute" and the "construct." In German, this form is sometimes found with the preposition "zu," but always in "en" and is thus exemplified by "sagen" and "schlafen." In Latin, its "complementary" form can accompany the verbs "volo" (WOA-low) and "nolo" (NOAL-low). Spanish first conjugation verbs take this form when they end in -ar, like "hablar"; in English, overly-parsimonious grammarians warn against "splitting" them. For 10 points, name this verb form, exemplified by the English "to do."

ANSWER: present **infinitives**

080-12-59-04102

2. The government of this city began the controversial Galliarda beautification project. Legend has it that Hazrat Mian Mir laid the foundation of one building in this city. The Sarovar is a tank here which contains holy water. Its name comes from the "Pool of the Nectar of Immortality," an item created by this city's founder, Ram Das. Adherents of a particular faith were horrified when troops entered this city as part of Operation Blue Star. The most famous building in this city is officially titled the Harmandir Sahib. That gurdwara was completed by Arjun Dev and houses the Adi Granth. For 10 points, name this city in India, home to the Sikh Golden Temple.

ANSWER: **Amritsar** [or **Ramdaspur**; or **Ambarsar**]

052-12-59-04103

3. This king created the positions of "baillis" and "seneschals" to supervise local government. This man was placed under interdict for refusing to give up his third wife and retake Ingeborg of Denmark, his second wife. This ruler built a namesake city wall to fortify Paris. After capturing the castle of Chateau-Gaillard, he proceeded with the conquest of Normandy. A coalition of the Count of Flanders, Emperor Otto IV, and the Count of Boulogne failed to defeat this man at the Battle of Bouvines. Despite possibly having a homosexual affair with Richard I on the Third Crusade, he waged many wars against the Angevin Empire. For 10 points, name this King of France from 1180 to 1223, whose byname was a Roman title.

ANSWER: **Philip II** Augustus of France [or **Philip Augustus**; or **Philip the Great**; or **Philippe Auguste**; prompt on **Philip**; prompt on **Philippe**]

080-12-59-04104

4. In one work by this man featuring a number of drinking songs, the government closes all the pubs for its citizens' supposed good. George Bernard Shaw created a portmanteau to parody this man's friendship with Hilaire Belloc. This author of *The Flying Inn* wrote a novel in which the commoner Auberon Quin becomes king of England and makes the different boroughs of London go to war with one another. In "The Blue Cross," he introduced the criminal Flambeau, who is foiled by a Catholic priest/detective. Another of his works ends after Gabriel Syme learns that the other weekdays are also undercover detectives. For 10 points, name this author of *The Napoleon of Notting Hill*, the Father Brown stories, and *The Man Who Was Thursday*.

ANSWER: Gilbert Keith **Chesterton**

105-12-59-04105

5. The groups of this type are ones that given a vector space over a field, preserve a non-degenerate quadratic form over that space. Euler's conjecture on Graeco-Roman Squares was refuted for $n=6$ by finding this sort of matrix. Householder matrices are always symmetric and this. Linear transformations of this type preserve inner products. Fourier's theorem is dependent on trigonometric functions having this property, which means the integral from negative π to π of $\sin kx$ times $\sin jx$ dx is only non-zero for k equals j . If the vectors in a basis are of unit length and this, then they are orthonormal. If the dot product of two vectors is zero, the vectors are this to each other. For 10 points, name this adjective used to describe lines or curves that are perpendicular.

ANSWER: **orthogonal**

001-12-59-04106

6. Delis in this city are known for a codfish patty usually served with mustard between two saltines. In this city, Isaac Emerson copied Florence's Palazzo Vecchio, but moved the clock face up, to design a tower owned by Bromo-Seltzer. I.M Pei designed a pentagonal, 405-foot World Trade Center for this city, whose neighborhoods include Locust Point and Fells Point. Suburbs of this city include the largely-Jewish Pikesville and Towson, and it was the eastern terminus of an early railroad out to the Ohio River, which was partly named for it. This city recently renovated its Inner Harbor, and it's home to the Pimlico race course. For 10 points, name this city once guarded by Fort McHenry, the largest in Maryland.

ANSWER: **Baltimore**, Maryland

104-12-59-04107

7. One piece of art about this war was created by Sal Veder and depicts Robert Stirm, who had received a letter of separation from his wife three days before. Besides *Burst of Joy*, which depicts a teenager eagerly racing towards her returning father, this conflict was represented by a work showing a girl mouthing the words "too hot, too hot." One photo of this conflict depicts a national police chief about to shoot and execute his prisoner, while another photo features a naked screaming child running on a road after being burned by napalm. For 10 points, name this conflict represented by a photograph in which General Nguyen Ngoc Loan executes Nguyen Van Lem on a street in Saigon.

ANSWER: **Vietnam** War

052-12-59-04108

8. After pushing the protagonist of this work's car into a ravine, a policeman tells him, "Them that don't have cars don't need licenses." Another character in this work spends his afternoons unsuccessfully flirting with the waitress of the Frosty Bottle before visiting the "muvseevum" that contains a shrunken artifact. The protagonist's second encounter with the police comes when they beat him to death after he has blinded himself and is found lying in a ditch. Enoch steals a mummy and tries to make it the "new jesus" of the protagonist's new religion. For 10 points, Hazel Motes tries to start the Church Without Christ in what novel, the first by Flannery O'Connor?

ANSWER: **Wise Blood**

121-12-59-04109

9. In his last days, this man called Whitelaw Reid a "son of a bitch" and accused him of stealing his prized possession. One cartoon depicts this man shaking hands with a Southerner as they stand over a dead black man, a reference to his call for Americans to "clasp hands over the bloody chasm." He published "The Prayer of Twenty Millions," an open letter calling on Lincoln to free the slaves. In his presidential campaign, he was mocked for signing a bond for the release of Jefferson Davis. This man died before the 1872 electoral votes were counted, though his Liberal Republican campaign was easily beaten by Ulysses Grant. For 10 points, name this founder of the *New York Tribune* who was credited with the quote "Go West, young man."

ANSWER: Horace **Greeley**

052-12-59-04110

10. In polymer solutions, these phenomena occurs through a process called spinodal decomposition, and one of these that does not break symmetry occurs in the two-dimensional XY model and is of infinite order. Continuous ones can be sorted into universality classes by their critical exponents. One equation for describing these phenomena equates the derivative of pressure with respect to temperature to the inverse of temperature times the change in volume; that equation is named for Clausius and Clapeyron ("KLAH-peh-rohn"). Black postulated a form of energy that is absorbed or released during this phenomenon without causing a change in temperature, known as latent heat. For 10 points, name this type of physical phenomenon whose variants include deposition, sublimation, and melting.

ANSWER: **phase transition** [accept equivalents like **phase change**; accept **separation** before "XY model"]

064-12-59-04111

11. This man fathered twins on Tyro, who murdered them, as part of an attempt to overthrow his brother Salmoeneus. To thwart Autolykus' attempts at theft, this man wrote the beginning of his name on his cattle's hooves, and in some myths, he seduced Autolykus' daughter Anticleia, thereby becoming the father of Odysseus. This man told the river god Asopus that Zeus was sleeping with his daughter Aegina. When Zeus then sent Hades to punish this man, this king of Corinth handcuffed Hades such that no one could die until he was freed. For 10 points, name this trickster, who endlessly rolled a boulder up a hill in Tartarus as punishment.

ANSWER: **Sisyphus**

080-12-59-04112

12. This man's government used the slogan "Believe, Obey, Fight!" and created a secret police called the OVRA. He made use of paramilitary groups that force-fed political opponents castor oil to give them diarrhea. This man, who launched the "Battle for Grain" and "Battle for Births," solidified his control by passing a law that gave 2/3 of the seats in parliament to any party with a plurality of votes. After his government assassinated a rival politician, 150 of his opponents withdrew from the Chamber of Deputies during the Matteoti Crisis. This leader signed the "Pact of Steel" with a northern country and made use of the "Blackshirts" to take power during the "March on Rome." For 10 points, name this Fascist leader of Italy during World War II.

ANSWER: Benito Amilcare Andrea **Mussolini**

080-12-59-04113

13. Reports on this living person's activities resulted in Sara Ganim becoming the second-youngest person to win a Pulitzer Prize. On the show *Rock Center*, Bob Costas called him "the unluckiest and most persecuted man that any of us has ever heard about." This man's actions resulted in perjury indictments for Gary Schultz and Tim Curley. He founded a charity called The Second Mile and wrote an autobiography titled *Touched*. This man supposedly engaged in an illegal activity witnessed by assistant Mike McQueary. After his arrest, college president Graham Spanier was forced to resign. For 10 points, name this former assistant for Joe Paterno at Penn State University, currently charged with over forty counts of sexual abuse of young boys.

ANSWER: Gerald Arthur "Jerry" **Sandusky**

052-12-59-04114

14. In this work, a story is related of a woman whose corpse is exhumed so that she can become the wife of a king named Peter. Besides telling of Ines de Castro, this work contains characters such as Monsayeed, who warns the main character of a plot against him. The main character of this work is opposed by Bacchus, who takes the guise of various Moors, but is helped by Venus, who eventually guides him to the Isle of Love, where he falls in love with Tethys. In this work, Adamastor represents the dangers faced by sailors near the Cape of Good Hope, and Vasco da Gama faces peril in Calicut. For 10 points, name this poem by Luis Vaz de Camoes, the national epic of Portugal.

ANSWER: *The **Lusiads*** [or *Os **Lusiadas***]

040-12-59-04115

15. One theory describing this phenomenon predicts an intensity distribution proportional to the square of the sinc function. The pattern produced by this effect is the same as that produced by the complementary body according to Babinet's principle. The first zero of the sinc function helps define a limit by which a system is limited by this phenomenon. One version of this phenomenon produces a feature of angular size approximately equal to 1.22 times lambda over D, called the Airy disk; that version occurs through a circular aperture. Huygens principle is often used to study this phenomenon, which occurs when light shines through an opening of any kind. For 10 points, name this phenomenon in which a wave bends around an object.

ANSWER: **diffraction**

048-12-59-04116

16. This man composed works such as "Warte, warte, wilder Schiffmann" (VAHR-te, VAHR-te, VIL-der SHIFF-mahn), "Auf einer Burg," and "Wehmut" (VAY-moot) during his "Year of Song." His piano concerto is an expansion of his earlier composition called *Phantasie*, and is in A minor. The "Sphinxes" movement is often omitted from his Opus 9, which includes the musical cryptogram A-S-C-H and movements titled for Florestan and Eusebius. In his Third Symphony, three trombones represent a bishop being made a cardinal at the Cologne Cathedral. For 10 points, name this composer of *Papillons*, *Carnaval*, and symphonies called "Rhenish" and "Spring".

ANSWER: Robert **Schumann**

079-12-59-04117

17. A prominent chancellor and merchant who served as regent for this dynasty's first ruler was Lu Buwei, who wrote the text *Lushi Chunqiu*. It split into the Eighteen Kingdoms. The Hundred Schools of Thought was purged via a massive book burning that occurred during this dynasty, which was brought down by a rebel leader named Liu Bang. The founder of this dynasty helped end a power vacuum that occurred following the collapse of the Zhou dynasty and was buried alongside a Terracotta Army. For 10 points, Shi Huangdi was the founder of what first imperial dynasty of China, which came before the Han dynasty?

ANSWER: **Qin** Dynasty

064-12-59-04118

18. In this work, John the Baptist reads from a Bible in which the first words of Isaiah 40, "comfort ye," can be seen. When closed, this work shows its patrons kneeling before illusionistic sculptures of John the Baptist and John the Evangelist. Statuesque depictions of Cain and Abel appear above the nude Adam and Eve on the sides of this work, in which a red-robed Jesus wears a papal crown. Saints, martyrs, and apostles gather in the largest panel of this work to honor a creature whose blood is pouring into a chalice. It is sometimes titled for that panel, the *Adoration of the Lamb*. For 10 points, name this altarpiece by Hubert and Jan van Eyck.

ANSWER: Ghent Altarpiece [or Adoration of the Lamb before mentioned]

105-12-59-04119

19. This poet wrote, "ask for no Orphean lute to pluck life back" in a poem concluding, "The Lord survives the rainbow of his will." That poem describes "the end of the whaleroad and the whale." In another poem, the speaker states, "I hear my ill-spirit sob in each blood cell," before observing a creature that "drops her ostrich tail, and will not scare." This man, who dedicated that poem to Elizabeth Bishop, also described how "giant finned cars nose forward like fish" in a poem noting, "Colonel Shaw is riding on his bubble." For 10 points, name this American poet of "The Quaker Graveyard in Nantucket," "Skunk Hour," and "For the Union Dead."

ANSWER: Robert Lowell

014-12-59-04120

20. The size of these objects which are NOT found outside the cell is regulated by Orofaciodigital Syndrome 1 protein. The stabilization and formation of these structures is aided by ANA2. In *C. Elegans*, formation of these objects requires ZYG-1 to phosphorylate SAS-6, but in humans the ZYG-1 is replaced in its role by PLK4. These cellular components have 9 fold symmetry and are replicated once per cell cycle. These objects are found in a larger structure along with the gamma-tubulin ring complex. These objects and basal bodies have a similar structure and composition. For 10 points, name these microtubule structures that are found in centrosomes, which serve as attachment points for the mitotic spindle and have a 9+3 structure.

ANSWER: centrioles [prompt on centrosomes; prompt on basal body]

001-12-59-04121

21. After the death of Patriarch Adrian, this ruler replaced the Patriarchate with the Most Holy Synod. In his youth, this man gained military experience in war games he played with his "toy army." This ruler faced a revolt consisting of a class of soldiers attempting to replace him with his sister Sophia. This ruler expanded his territory in his Azov campaign against the Ottomans, after which he founded a base at Taganrog. This ruler found his old friend Gerrit Kist in Zaandam and worked for Lynst Rogge at a shipyard while part of the Grand Embassy. The victor at the Battle of Poltava, for 10 points, name this ruler who defeated Charles XII of Sweden in the Great Northern War and built a namesake "window to the West" on the Baltic.

ANSWER: Peter the Great [or Peter I of Russia; or Pyotr Alekseyevich; or Pyotr Veliky; prompt on Peter; prompt on Pyotr]

141-12-59-04122

22. This poem asks, “What is it that will last? All things are taken from us, and become portions and parcels of the dreadful past.” Characters in this poem worry that they “should come like ghosts to trouble joy” and declare, “Let what is broken so remain.” The first speaker describes “a land in which it seemed always afternoon” where he encounters the “mild-eyed melancholy” title characters, who sing a “choric song” concluding, “O, rest ye, brother mariners, we will not wander more.” For 10 points, name this poem by Lord Tennyson about the consumers of a certain psychoactive fruit from the *Odyssey*.

ANSWER: “The Lotos-Eaters”

014-12-59-04123

23. This quantity is the intensive natural variable of Helmholtz free energy. In statistical mechanics, the canonical ensemble holds this quantity constant. The internal energy due to a quadratic degree of freedom is proportional to this quantity according to the equipartition theorem, which sets that energy as one-half Boltzmann’s constant times this quantity. The negative conductivity times the gradient of this quantity appears on one side of Fourier’s law. Black body radiation is proportional to this quantity raised to the fourth power according to the Stefan-Boltzmann law. Entropy is multiplied by this quantity when calculating Gibbs free energy. Heat capacity measures the energy necessary to change this quantity. For 10 points, name this quantity measured in Kelvins.

ANSWER: temperature

132-12-59-04124



1. This work was published in 1934, compiled from the first Williams James Lecture given at Harvard. For 10 points each:

[10] Name this aesthetic text, which claims that a work of art is not identical with the "art product," or the physical object, but arises out of the "Live Creature's" engagement with the object.

ANSWER: "**Art as Experience**"

[10] "Art as Experience" is a work by this author of "The Reflex-Arc Concept in Psychology," who attacked the "philosophic fallacy" in *Experience and Nature*.

ANSWER: John **Dewey**

[10] This major work by John Dewey argues that public schools will help create better citizens by developing their abilities instead of teaching them only facts.

ANSWER: **Democracy and Education**

080-12-59-04201

2. This woman's two children playing in the sand may be depicted in a scherzo in one of her husband's symphonies. For 10 points each:

[10] Name this woman whose composition teacher, Alexander von Zemlinsky, once seduced her. Her theme appears in her husband's sixth, or *Tragic*, symphony.

ANSWER: **Alma** Maria Mahler Gropius Werfel [or Alma Maria **Schindler**; or **Alma Mahler**; prompt on **Mahler**; prompt on **Gropius**; prompt on **Werfel**]

[10] Near the end of her life, Alma attended rehearsals by this long-time director of the New York Philharmonic and composer of *West Side Story*.

ANSWER: Leonard **Bernstein**

[10] Dedicated to Serge Koussevitzky, this Bernstein composition consists of The Seven Ages and The Seven Stages. It was inspired by a long poem about three men and a woman who meet in a New York bar.

ANSWER: Bernstein's **Symphony No. 2** [or *The Age of Anxiety*]

020-12-59-04202

3. The effective mass of these particles are altered by matter in the MSW effect. For 10 points each:

[10] Name these weakly interacting leptons whose low mass is thought to be explained by the Seesaw mechanism. A faulty optics cable may explain OPERA's results, which deal with these particles.

ANSWER: **neutrinos**

[10] The Homestake experiment first provided evidence that neutrinos undergo this phenomenon, in which the namesake quantum number changes. In order for this phenomenon to occur neutrinos must have mass.

ANSWER: **flavor oscillation** [prompt on partial]

[10] The Homestake experiment measured the number of neutrinos emitted by this celestial object, which is located at the center of the solar system. Light from this object can produce Baily's beads.

ANSWER: **Sun**

149-12-59-04203

4. One type of these institutions established a system of quality control over their products, while another was responsible for coordinating trade embargoes. For 10 points each:

[10] Name these medieval associations of merchants or craftsmen.

ANSWER: merchant **guilds** [or craft **guilds**]

[10] After completing their apprenticeships, aspiring members of craft guilds achieved this rank. They could be paid for their labor, but had to submit a "masterwork" to become a master.

ANSWER: **journeyman**

[10] Another association of guilds, the Hansa, established these outposts in cities where they wanted to trade.

ANSWER: **Kontors**

080-12-59-04204

5. Norse gods of this entity include Aegir and Njord, and Thor pulls the Midgard Serpent out of this entity using a baited hook while on a trip with Hymir. For 10 points each:

[10] Name this geographical entity.

ANSWER: the **sea** [or the **ocean**]

[10] This Inuit sea goddess also rules the underworld, called Adivun. In one myth, she was initially married off to a man who turned out to be vicious raven in disguise.

ANSWER: **Sedna**

[10] In several versions of the Sedna myth, Sedna's father attempts to throw her from his kayak and cuts off these body parts of hers, which then originated diverse Arctic wildlife.

ANSWER: **fingers**

014-12-59-04205

6. This leader was killed at the Battle of Cerro Cora. For 10 points each:

[10] Name this Paraguayan leader whose invasion of Mato Grosso sparked a conflict with Brazil, Argentina, and Uruguay.

ANSWER: Francisco Solano **Lopez**

[10] Lopez led Paraguay during this 1864 to 1870 conflict in South America.

ANSWER: War of the **Triple Alliance**

[10] This president of Argentina from 1862 to 1868 was initially the commander of allied forces, but gave up his position in 1866 to the Duke of Caxias.

ANSWER: Bartolome **Mitre**

064-12-59-04206

7. After the death of his master, this character berates his fellows in a speech declaring, "Often when one man follows his own will many are hurt. This happened to us." For 10 points each:

[10] Name this son of Weohstan, the only warrior to join Beowulf in his fight against the dragon.

ANSWER: **Wiglaf**

[10] Many years prior to fighting the dragon, Beowulf defends Hrothgar's hall by slaying this monster and his mother.

ANSWER: **Grendel**

[10] As Beowulf lies dying after the battle with the dragon, he asks Wiglaf to bring him this.

ANSWER: the dragon's **treasure** [or obvious equivalents]

014-12-59-04207

8. In this art technique, the canvas is placed over a textured object and the dried paint above that object is scraped over. For 10 points each:

[10] Name this Surrealist art technique.

ANSWER: **grattage**

[10] The inventor of frottage and grattage was this German Dadaist and surrealist, whose works include *The Temptation of St. Anthony* and a bizarre photomontage, *Here Everything is Still Floating*.

ANSWER: Max **Ernst**

[10] This Catalan painter of *Dog Barking at the Moon* and other "dream pictures" helped Ernst develop the grattage technique.

ANSWER: Joan **Miro** i Ferrà

003-12-59-04208

9. Answer the following about the biology of a neuron, for 10 points each:

[10] A neuron is typically composed of dendrites, the cell body, and this long projection which carries a signal away from the cell body.

ANSWER: **axons**

[10] This is the term for the event in which a neuron's membrane potential rapidly rises and falls, firing one of these. It is prompted by a stimulus that overcomes the threshold potential.

ANSWER: **action potential**

[10] Name this period after the peak of the action potential between repolarization and the membrane's return to resting state. During this period, another action potential is not possible because the membrane potential is too low.

ANSWER: **refractory** period

126-12-59-04209

10. In this play, Rosemary Sydney persuades Howard Bevans to skip the title event with her prior to their marriage the next morning. For 10 points each:

[10] Name this William Inge play which ends when Madge packs a suitcase and runs off with the drifter Hal, a college friend of her presumed fiancé Alan.

ANSWER: ***Picnic***

[10] William Inge wrote the screenplay for Elia Kazan's *Splendor in the Grass*. Kazan's adaptation of this Tennessee Williams play stars Vivien Leigh as Blanche DuBois and Marlon Brando as Stanley Kowalski.

ANSWER: A ***Streetcar Named Desire***

[10] In this other Inge play, the alcoholic Doc Delaney goes on a violent rampage in response to the hypocritical behavior of his wife Lola, whose dog acts as a surrogate for the baby who died when she chose to have it delivered by a midwife.

ANSWER: ***Come Back, Little Sheba***

014-12-59-04210

11. Answer the following about animals within psychological experimentation, for 10 points each.

[10] This behaviorist proposed a pigeon-guided missile during World War II. He is more famous for developing an air crib and his namesake box, also known as an “operant conditioning chamber.”

ANSWER: Burrhus Frederic **Skinner**

[10] This psychologist performed many experiments with monkeys, such as having them raised by a surrogate terrycloth mother, or testing isolation by placing them in the “pit of despair.”

ANSWER: Harry Frederick **Harlow** [or Harry **Israel**]

[10] In this Canadian experiment, Bruce Alexander placed test animals into the title location, which was spacious and filled with toys. He found most of the animals chose regular water over water laced with morphine, supporting his point that people choose drugs because of terrible living conditions.

ANSWER: **Rat park** study

052-12-59-04211

12. He won the Nobel Prize for Literature in 1998. For 10 points each:

[10] What atheist author’s works include *Death with Interruptions* and *Cain*?

ANSWER: Jose **Saramago**

[10] The Doctor’s Wife is the only character not afflicted with the title epidemic in what most famous Saramago novel?

ANSWER: **Blindness** [or *Ensaio Sobre a Cegueira*; or *Essay on Blindness*]

[10] This other Saramago novel is a controversial retelling of early Christianity in which the title character is depicted living with Mary Magdalene and having second thoughts about the crucifixion.

ANSWER: *The **Gospel According to Jesus Christ*** [or *O **Evangelho Segundo Jesus Cristo***]

147-12-59-04212

13. This man names a space that is complete and has an inner product. For 10 points each:

[10] Name this German mathematician, whose namesake program was intended to create a finite, complete and consistent set of axioms that would serve as a foundation for all mathematics.

ANSWER: David **Hilbert**

[10] Hilbert's program was proven infeasible in the incompleteness theorems of this man, who showed any theory elaborate enough to allow basic arithmetic could not be both complete and consistent.

ANSWER: Kurt **Gödel**

[10] The converse of completeness in logic is this property. Because first-order logic has this property, any sentence that can be deduced from a set of sentences is logically implied by those sentences.

ANSWER: **soundness**

121-12-59-04213

14. Candidates for this position must receive nominations from at least five hundred elected officials; a 2000 referendum cut its term from seven years to five. For 10 points each:

[10] Name this office, which was won by François Hollande in 2012.

ANSWER: **President of France** [or obvious equivalents]

[10] Hollande is a member of this political party. Sarkozy defeated its nominee, Ségolène Royal, in runoffs in 2007 to win the election.

ANSWER: French **Socialist** Party [or Parti **socialiste**]

[10] Sarkozy became the first president to serve only one term since this man, president from 1974 to 1981. More recently, this man was the head of the Convention on the Future of Europe, which created a draft for the European Constitution that failed to be ratified in 2004.

ANSWER: Valéry **Giscard** d'Estaing

121-12-59-04214

15. This figure's brother, Menoetius, was banished to Tartarus after being struck by Zeus's lightning. For 10 points each:

[10] Name this son of Iapetus who was tasked with assigning an attribute to every animal but forgot to give one to man.

ANSWER: **Epimetheus**

[10] Epimetheus accepted this wife from Zeus, who was left with only hope after releasing all the evils into the world by opening her namesake box.

ANSWER: **Pandora**

[10] This son of Deucalion and grandson of Pandora was the ancestor of all Greeks. His son Aeolus was the ancestor of the Aeolians, and his son Dorus was the ancestor of the Dorians.

ANSWER: **Hellen**

079-12-59-04215

16. Answer the following about a river known as the Shatt-al-Arab, for 10 points each.

[10] The Shatt-al-Arab is in this country's southeast, on the Persian Gulf. This country's cities include Fallujah and Tikrit, and its capital had an occupied "Green Zone" starting in 2003.

ANSWER: **Iraq**

[10] This is Iraq's largest city along the Shatt-al-Arab. This city near Kuwait is home to the South Oil company, and its residents saw heavy fighting during the 2003 invasion.

ANSWER: **Basra**

[10] These tribes lived on artificial islands made of reeds and piloted boats called *mashoof* until Saddam Hussein drained their traditional habitat in 1991. As the area recovers, they're returning to their old ways.

ANSWER: **Marsh Arabs** [or **Arab al-Ahwar**; or **Ma'dan**; or **Madi**]

104-12-59-04216

17. Centered at cities such as Sidon and Byblos, this civilization used galleys to trade along much of the Mediterranean Coast. For 10 points each:

[10] Name this early civilization famed for its early alphabet and purple dye.

ANSWER: **Phoenicians**

[10] The color of the Phoenician dye was sometimes named for this city, which Alexander the Great besieged in 332 BC with the help of a giant causeway.

ANSWER: **Tyre** [or **Sur**; or **Tyrus**; or **Zor**]

[10] In 314 BC, this man also besieged Tyre. He and his son Demetrius were later defeated at Ipsus.

ANSWER: **Antigonus** the One-Eyed [or **Antigonos** Monophthalmos]

015-12-59-04217

18. Some of his early works were written under the pseudonym Jonathan Oldstyle. For 10 points each:

[10] Name this man who included "Adventure of the German Student" in his short story collection *Tales of a Traveller*.

ANSWER: Washington **Irving**

[10] Irving also wrote this story about a man who misses the American Revolution when he sleeps for twenty years in the Catskills.

ANSWER: "**Rip Van Winkle**"

[10] In "Rip Van Winkle," Rip realizes later that the men he saw playing ninepins in the mountains are companions of this historical figure.

ANSWER: Hendrick **Hudson** [or Henry **Hudson**]

014-12-59-04218

19. Answer these questions about the lanthanide contraction for 10 points each.

[10] The lanthanide contraction refers to the decrease in the ionic form of this quantity, which is typically measured in picometers or angstroms.

ANSWER: **radius**

[10] The lanthanides are the first elements to have electrons in this atomic orbital with azimuthal quantum number 3.

ANSWER: **f** orbital

[10] The lanthanide contraction occurs because electrons in an f orbital do a poor job of carrying out this phenomenon, in which electrons screen out other electrons from feeling the full force of the nucleus.

ANSWER: nuclear **shielding**

064-12-59-04219

20. The first shots in this battle were fired near the Old Kennett Meetinghouse, a location owned by Quakers. For 10 points each:

[10] Name this battle in which the losing side's left wing was crushed by Wilhelm von Knyphausen's force at Chadds Ford. Nathanael Greene's division managed to hold off the victors long enough for a successful retreat.

ANSWER: Battle of **Brandywine** Creek

[10] The Battle of Brandywine was a victory for William Howe as part of his successful campaign to take this Pennsylvania city, which was the seat of the Second Continental Congress.

ANSWER: **Philadelphia**

[10] One member of this Pennsylvania family was a minister who served as a brigadier general under Greene at Brandywine. Another member of this family was the first Speaker of the House.

ANSWER: **Muhlenberg** [or Peter **Muhlenberg**; or Frederick **Muhlenberg**]

052-12-59-04220

21. Gail Halvorsen dropped candy in miniature parachutes during this operation. For 10 points each:

[10] Name this 1948 aid mission codenamed "Operation Vittles."

ANSWER: **Berlin Airlift**

[10] "Tonnage" Turner revamped the logistics of the airlift after a C-54 airplane crashed on a day given this name. The machinations of James Fisk and Jay Gould brought about another event of this name.

ANSWER: "**Black Friday**"

[10] This American general in charge of the U.S. occupied zone in Germany gave the order to begin the Berlin Airlift.

ANSWER: Lucius DuBignon **Clay**

105-12-59-04221