

Tossups

1. CDZA released a cover of this song in which its lyrics had been translated through every language on Google Translate. In 2013, police shut down all the schools in Beaver County Pennsylvania for a day after a student sang it as his answering machine message. In the video for this song, the singer is handed a pink and orange ticket to "Luxury Airlines." In the full version, the singer mistakes a waiting limo driver for a cop and marvels at "drinking orange juice out of a champagne glass." In its video, the singer pretends to use a can of spray paint as deodorant spray. The singer of this song tells a cabbie "yo homes, smell ya later!" after getting into a fight with "a couple of guys who were up to no good" who started making trouble in his neighborhood. For 10 points, name this Will Smith song.

ANSWER: theme song from *The Fresh Prince of Bel-Air*

2. An "Independent" member of this party who resigned a cabinet post to protest World War II conscription was named Chubby Power. A precursor of this political party was led by a man who was shot by a disgruntled former employee named George Bennett. The first prime minister from this party had earlier supported George Brown while editing the *Lambton Shield*. During the 1993 election, it set out its platform in the Red Book. This party grew out of the Rouges and Clear Grits, and its prime ministers include a Nobel Peace Prize winner and the first French-Canadian to hold the position. This party first came to power after the Pacific Scandal and the resignation of John A. Macdonald. For 10 points, name this center Canadian political party opposed by the Conservatives.

ANSWER: Liberal Party of Canada

3. Physicists use this mathematical object to regularize divergent sums, setting its value for argument $1-k$ to be minus the k th Bernoulli number over k . By Voronin's theorem, this function exhibits universality, so that it can approximate any non-zero holomorphic function arbitrarily closely inside its critical strip. A generalization of one conjecture about this function is stated in terms of Dirichlet L-functions. For a complex number s with real part greater than 1, this function equals the sum of " n to the negative s " taken over all positive integers n . It is an important open question whether all of its nontrivial zeroes have real part one-half. For 10 points, name this function that is the subject of the Riemann hypothesis.

ANSWER: Riemann zeta function

4. Miners from this culture had to appease an archdemon who crawled out just to watch human babies sleep at night. This people believed each mountain had a guardian spirit called an *apu*, and saw silver as the tears of the moon. One of their goddesses became a rock by leaping into the ocean with a child she conceived by eating sperm in the form of a fruit. These people believed in the trickster Coniraya and the underworld demon Supay. Their creator god destroyed a race of idiot giants made from stone, and they arose where a golden staff sank into the earth. They saw the Milky Way as a jug full of rain, and believed that a great flood called Unu Pachakuti was sent by Viracocha. For 10 points, name this empire of the Americas created by Manco Capac, which revered the sun god Inti.

ANSWER: Incan civilization [or Quechua people; prompt on "Andeans" or "Peruvians" or "indigenous South Americans"; do not accept "Tawantinsuyu" from jackasses, because that is their name for the territory encompassing the whole known world, not their own people]

5. The impact of this case was lessened in a ruling in which Warren Burger wrote about certain "fundamental values"; that case was *Bethel v. Fraser*, which had a similar outcome to *Hazelwood v. Kuhlmeier*. This case established a test of "material and substantial disruption." It grew out of a decision supported by Ora Niffenegger, and the namesakes of this case received help from Craig Sawyer and Dan Johnston of the ICLU. Christopher Eckhardt's suspension led to this case. Abe Fortas's majority opinion in this case said that no constitutional rights were shed when people got to "the schoolhouse gate." For 10 points, name this Supreme Court case in which First Amendment rights were supported after three students wore black armbands protesting the Vietnam War to a school in Iowa.

ANSWER: Tinker v. *Des Moines Independent Community School District*

6. In one story by this author, a woman who gets rid of unwanted children and her husband who makes oil from

animals combine their businesses and start making oil from babies. In another story by this author, a jury declares that a mountain lion caused Hugh Morgan's death after William Harker's testimony of an attack by some unseen being. In addition to "Oil of Dog" and "The Damned Thing," he wrote a story in which a disguised man tells the protagonist that a flood has left driftwood lodged by a wooden pier, allowing sabotage by burning. The protagonist of that story then imagines his escape from execution before his death by hanging. For 10 points, name this man who wrote about Peyton Farquhar in "An Occurrence at Owl Creek Bridge."

ANSWER: Ambrose Gwinnett **Bierce**

7. A contemporary of this composer named Thomas Roseingrave helped popularize his music in England. One musicologist argued that most of this composer's sonatas are characterized by a pivotal point in each half called the crux. According to legend, the main theme of one of his works was inspired by his cat Pulcinella walking on his keyboard, hence that work's nickname, the *Cat Fugue*. One catalogue of this composer's works was created by Giorgio Pestelli. His best known religious works include his setting of the *Stabat Mater* and his *Salve Regina*, his last known work. A chronologically ordered catalogue of most of this composer's works was created by Ralph Kirkpatrick. For 10 points, name this composer of 555 keyboard sonatas, the son of Alessandro.

ANSWER: (Giuseppe) **Domenico Scarlatti**

8. One member of this movement was the author of the poetry collection *Body Sweats*, Elsa von Freytag-Loringhoven, also known as "The Baroness." A play written by one of the founders of this movement ends with the repeated line "This will end with a lovely marriage." Another of its founders wrote the poem "Karawane." A founder of this movement wrote the plays *Handkerchief of Clouds* and *The Gas Heart*, and appears along with James Joyce and Vladimir Lenin in Tom Stoppard's *Travesties*. This movement held meetings at a Zurich cabaret named after Voltaire, and was founded by people like Hugo Ball and Tristan Tzara. For 10 points, name this avant-garde movement whose name comes from the French for "hobbyhorse."

ANSWER: **Dadaism**

9. A "shortcut" method for analyzing this process uses the Kirkbride equation and Gilliland correlation, and is called the FUG method. In another method analyzing this process, assuming constant molar overflow, the q-line is drawn from the 45 degree line to separate the rectification and stripping sections. The logarithm of the ratio of K-values for the heavy key and the light key appears in the denominator of an equation giving the minimum number of theoretical stages required in this process. The bottoms product from this process is fed back into a reboiler, while the overhead product is condensed and refluxed. For 10 points, name this process which separates liquids of different volatilities in a namesake column.

ANSWER: **distillation** [or **fractional distillation**; or **simple distillation**; or **batch distillation**; or other kinds of distillation]

10. This author wrote a novel in which the Marquis Tudesco tries to help the title character become a good citizen, *The Aspirations of Jean Servien*. One of this author's characters runs into Madame Trepof, whose husband collects match-boxes, after acquiring a Clark Alexander translation of *The Golden Legend of Jacques de Voragine*. In another of his novels, a certain society's property rights are established by knocking each other on the head. That novel, in which Charlemagne is represented by Draco the Great, features a discussion between God and the saints about the validity of the snow-blind Breton monk Mael's baptism of the title animals. For 10 points, name this French author of *The Crime of Sylvestre Bonnard* and *Penguin Island*.

ANSWER: Anatole **France**

11. Nathaniel Wanley related a story that this ruler had the Abbot of Baigne construct an instrument out of squealing pigs. This king made a marshal of Jean de Lescun, the "bastard of Armagnac," and he imprisoned his father's ministers Antoine de Chabannes and Pierre de Breze. Following this king's death, Philippe de Commines was imprisoned in Loches, where this king had a small cage built and then occupied by Jean Balue. He avoided a war by paying Edward IV in the Treaty of Picquigny. This founder of the Order of Saint Michael led the Praugerie against his father and was opposed by his brother's League of the Public Weal. For 10 points, name this Valois French king and son of Charles VII whose intrigues led him to be called "the universal spider."

ANSWER: **Louis XI** [accept **Louis the Universal Spider** before it is read; prompt on "Louis"]

12. The anharmonicity of these particles is quantified by the Gruneisen parameter. Since these particles are always

anharmonic in reality, they scatter off one another, with the scattering being elastic only at temperatures far below “theta-sub-D”, where umklapp processes are frozen out. These particles have three independent polarizations, marking one difference in the analysis of a black-body-like model in which the namesake temperature “theta-sub-D” equals the ratio of Planck’s constant to Boltzmann’s constant, all times the maximum frequency of these collective excitations. That model yields a temperature-cubed dependence for heat capacity at low temperatures, and is named for Debye. For 10 points, name these quasiparticles that correspond to quantized vibrational modes of lattices.

ANSWER: phonons [prompt on “vibrations” or similar]

13. The commissioner of this building picked its architect after seeing his work on the Charleston County Courthouse. Louis Comfort Tiffany modified it by adorning its entrance hall with a massive multi-colored glass screen, which was taken out in 1902 when Charles McKim renovated the whole building. This building was modeled after the Leinster House by its original architect, who used a modified version of north and south porticos designed by B.H. Latrobe when he rebuilt it after a fire. It was built by James Hoban, who won five hundred dollars in a design competition. Rooms in this building include the Blue Room, the Map Room, and the Cabinet Room, which overlooks the Rose Garden. For 10 points, name this residence which also contains the Oval Office.

ANSWER: The White House

14. This painter showed Peter and Paul flying through the air with swords in a painting showing the meeting between Leo I and Attila the Hun. He included *The Miraculous Draught of Fishes* as part of his series based on the lives of Peter and Paul. In one of his paintings, three putti take aim at the central woman, who rides a shell-chariot pulled by two black dolphins. He painted two angels holding chalices to catch the central figure’s blood, while Mary, St. Jerome, John the Evangelist, and Mary Magdalene watch from below. This artist of a series of seven cartoons commissioned for the Sistine Chapel also painted *The Triumph of Galatea* and the *Mond Crucifixion*. For 10 points, name this Italian renaissance painter who depicted philosophers like Averroes and Plato in *The School of Athens*.

ANSWER: Raphael [or Raffaello Sanzio da Urbino]

15. In mass spectrometry, this protein, obtained from horse hearts, is a common calibration standard. In humans but not other animals, this protein has a cysteine at residue 110 that is nitrosylated by nitric oxide, making this protein a “scavenger” of nitric oxide. Brown urine is found in patients with rhabdomyolysis because this protein is being broken down. It was isolated from sperm whales by John Kendrew and was the first protein to be targeted by X-ray crystallography. It has a Hill coefficient of 1, a p50 of 2.8 torr, and a hyperbolic-shaped dissociation curve which is independent of pH. The ability of this protein to bind substrate tightly even at low partial pressure enhances the deep-sea diving ability of marine mammals. For 10 points, name this protein that transports oxygen in muscles.

ANSWER: myoglobin [do not accept or prompt on “hemoglobin”]

16. According to an essay by this man, novels chiefly serve as conduct manuals for “the young, the ignorant, and the idle.” He argued that the line from *Hamlet* about “whips and scorns of time” should read “quips and scorns of title.” In a poem, he called his home city the “needy villain’s general home.” “His only play, *Irene*, was a decisive failure. He wrote a poem which asks the reader to “remark each anxious Toil, each eager Strife, and watch the busy scenes of crowded Life.” That poem, an imitation of Juvenal’s tenth satire, is “The Vanity of Human Wishes.” He wrote biographies of Richard Savage and many others, published as *Lives of the Most Eminent English Poets*. For 10 points, name this author much admired by Boswell, who wrote a famous dictionary.

ANSWER: Dr. Samuel Johnson

17. In a proem by this thinker, the sun's daughters open a gate which divides the paths of night and day. In text written after his death, he questions whether hair, mud, and dirt are grounded in ideas. He is credited with the argument that large objects can only partake of the Form of Largeness if there is a superseding form that the Form of Largeness partakes in, and so on ad infinitum. This student of Xenophanes divided inquiry into *aletheia* and *doxa*, or the “Way of Truth” and the “Way of Opinion.” In a namesake dialogue, this man delivers the “Third Man” argument. 160 lines of fragments from his hexameter poem “On Nature” survive. This man taught Zeno at the Eleatic school, and Zeno's paradoxes defend this man's worldview. For 10 points, name this pre-Socratic thinker who held that nature was one and unmoving.

ANSWER: Parmenides

18. This ruler allegedly retreated after he had a dream caused by Vasily I moving the Vladimir Mother of God icon to Moscow. The White Palace was built by this ruler in his birthplace, Shahrisabz. He was succeeded by his son Shahrukh, and his court was visited by the Spanish emissary Ruy Gonzalez de Clavijo. This ruler defeated the sultan Mahmud Tughluq on his way to sacking Delhi. A victory at the Battle of Ankara included this man's forces capturing Bayezid the Thunderbolt. He got a decisive victory on the Kur River against his rival, Tokhtamysh. The mausoleum Gur-e Amir was built for this ruler in his capital of Samarkand. For 10 points, name this Turkic conqueror whose wounding in a leg and arm by arrows led to his nickname "the Lame."

ANSWER: **Timur** the Lame [or **Timur**lenk; or **Tamer**lane]

19. An official at one of these places rotates a drill made of loquat wood against a flat block of cypress each night; that example of these places has its own salt refinery. Another of these places hangs a purple screen out front on holidays rather than the usual white curtain with four sixteen-petaled flowers printed on it. Horizontal ropes of twisted straw hold zigzagging streamers at these places, where visitors spit water out of their mouths near a basin where they use a ladle to wash their hands. A sacred mirror is allegedly stored in the holiest of these places, which is rebuilt every twenty years. These places have inner halls called *haiden* and *honden*. For 10 points, name these sacred complexes demarcated by double-crossbarred gates called *torii*, which revere spirits called *kami*.

ANSWER: **Shinto shrines** [or **Shinto temples**; or **Japanese shrines**; or **Japanese temples**; or **jinja**; or **jingu**; accept **haiden** before it is read; accept **honden** before it is read; accept **heiden**; accept **Ise Shrine** or **Ise Jingu** during the first sentence; prompt on "shrines" or "temples" alone]

20. This economist is the namesake of the effect in which futures prices become more volatile as the delivery date draws closer. He built off the work of Bertil Ohlin to show the situations in which trade differentials would be driven to zero with his factor price equalization theorem. This economist showed that a theory of consumer behavior could be derived without the notion of marginal utility by using very general assumptions like the weak axiom of revealed preference. He demonstrated that nearly all behavior can be seen as maximizing or minimizing subject to restrictions in his magnum opus *Foundations of Economic Analysis*, which is often credited along with the rest of his work with popularizing rigorous mathematical analysis in economics. For 10 points, name this first American Nobel prize winner and author of the popular textbook *Economics*.

ANSWER: Paul Anthony **Samuelson**

TB1. In one film by this director, a recently released patient from a mental institution kidnaps the pornstar Marina and makes her fall in love with him. Another of his films concerns a surgeon named Robert Ledgard who abducts a wedding-crasher and renames him Vera after performing sex-reassignment surgery on him. In another film by this director of *Tie Me Up! Tie Me Down!*, the protagonist's mother Irene appears and pretends to be a ghost after her own death in a fire. In his most famous film, the voice actress Pepa chases after terrorists trying to hijack a flight to Stockholm after drugging several policemen with sleeping pills hidden in gazpacho. For 10 points, name this Spanish director of *The Skin I Live In*, *Volver*, and *Women on the Verge of a Nervous Breakdown*.

ANSWER: Pedro **Almodovar**

Bonuses:

1. A resistance movement in this city was organized by the ZOB to stop deportations to Treblinka, and Jurgen Stroop was responsible for having its Great Synagogue bombed. For 10 points each:

[10] Name this Eastern European capital city that during World War II was the site of a 1943 Ghetto Uprising and a 1944 uprising led by Bor-Komorowski.

ANSWER: Warsaw [or Warszawa]

[10] During the uprisings, these places were used by resistance fighters to get around the city unseen. In Lviv, Leopold Socha used these places to hide a group of twenty-one Jews.

ANSWER: sewers [prompt on “tunnels” or answers related to being underground]

[10] This young man likely committed suicide to avoid capture in 1943 after he organized the Jewish Fighting Organization and led the Warsaw Ghetto Uprising.

ANSWER: Mordechai Anielewicz

2. The protagonist of this novel fires Stanley Graff for cheating his customers. For 10 points each:

[10] Name this novel about a man whose friends include Vergil Gunch and Paul Riesling, who is imprisoned for shooting his wife Zilla.

ANSWER: Babbitt

[10] This author set *Babbitt* in the fictional city of Zenith in Winnemac, the same fictional state in which he set his novel *Arrowsmith*.

ANSWER: Harry Sinclair Lewis

[10] This wife of Babbitt falls seriously ill, prompting him to break off his affair with Tanis and renew his devotion to her.

ANSWER: Myra Babbitt

3. Bonds between carbon and this element can be generated in the Buchwald-Hartwig coupling. For 10 points each:

[10] Name this element which is bonded to at least one alkyl group in an amine.

ANSWER: nitrogen [or N]

[10] Amines can also be generated by reduction of this functional group. This functional group can be formed from dehydration of amides and is hydrolyzed by acid into a carboxylic acid.

ANSWER: nitriles [prompt on cyanide; prompt on cyano]

[10] In the reductive amination of ketones, primary amines form imines as an intermediate, but secondary amines form these compounds. These compounds undergo C-alkylation in the Stork reactions.

ANSWER: enamines (pr. EEN-AMINES) [prompt on alkenes; prompt on beta-unsaturated amines]

4. One the far left of this painting, a statue with no hands wears a cross and holds a lightning bolt, while two workers sit on the removed head of a statue on the far right. For 10 points each:

[10] Name this painting that depicts capitalism on the left and communism on the right while a worker in the center operates machinery at the intersection of four ellipses behind a large hand holding an orb.

ANSWER: Man at the Crossroads [or Man, Controller of the Universe]

[10] This member of the Mexican Mural Movement and husband of Frida Kahlo painted *Man at the Crossroads*.

ANSWER: Diego Rivera

[10] Another Mexican muralist was José Clemente Orozco, who painted this large mural housed in Baker Library at Dartmouth. The scenes in this work progress from early human migration to modern industrial society.

ANSWER: The Epic of American Civilization

5. One example of a system with this type of constraint is a bead constrained to slide along a wire of fixed shape. For 10 points each:

[10] Name this type of constraint that can be written as a function only of generalized coordinates, possibly with explicit time dependence.

ANSWER: holonomic constraints

[10] For holonomic systems, the equations of motion can be derived using this man's principle of stationary action. He also names a function that is the Legendre transform of the Lagrangian and is equal to total energy in many simple cases.

ANSWER: William Rowan Hamilton [accept Hamiltonian]

[10] In the quantum-mechanical Hamiltonian for a free particle in three dimensions, the kinetic energy operator is proportional to this second-order differential operator. Loosely speaking, it measures local deviations from an average value.

ANSWER: Laplacian [or Laplace operator; or del squared; or del dot del; or div grad]

6. This son of Apollo and Coronis carried a rod with one snake wrapped around it, in contrast to the *caduceus* of Hermes, which had two such snakes. For 10 points each:

[10] Name this father of Hygieia and Panacea, the Greek god of healing.

ANSWER: Asclepius [or Asklepios; or Aesculapius]

[10] Asclepius received this divine punishment for resurrecting the dead Hippolytus. This punishment, which used an implement forged by the Cyclopes, was also given to Salmoneus for trying to imitate Zeus.

ANSWER: getting struck by Zeus's thunderbolt [or getting struck by lightning; accept reasonable synonyms such as "hit," "killed," etc. for "struck"; prompt on partial answers such as "getting killed by Zeus"]

[10] Sick people came to this Argive town, a cult center of Asclepius, to sleep until a vision told them how to heal. While patients rested here, their families could watch dramas in a huge amphitheater.

ANSWER: Epidaurus [or Epidavros]

7. Three of this poem's stanzas begin with the phrase "She looked over his shoulder." For 10 points each:

[10] Name this poem which describes a "ragged urchin ... who'd never heard of any world where promises were kept," which is about an object owned by a figure "who would not live long."

ANSWER: "The Shield of Achilles"

[10] This poem by the author of "The Shield of Achilles" declares "About suffering they were never wrong, the Old Masters."

ANSWER: "Musée des Beaux Arts"

[10] This author of "The Shield of Achilles" and "Musée des Beaux Arts" wrote "Those to whom evil is done do evil in return" in "September 1, 1939."

ANSWER: Wystan Hugh Auden

8. Disgraced sexist Colin McGinn wrote about the "explanatory gap" between this phenomenon and physical facts, and in philosophy of mind the "hard problem" of this property asks how humans can have qualia. For 10 points each:

[10] Name this state of mental awareness or self-awareness.

ANSWER: consciousness [or being conscious]

[10] This NYU philosopher wrote that consciousness has an inherently subjective character in "What is it like to be a bat?" His recent anti-Darwinist tract, *Mind and Cosmos*, was critically panned.

ANSWER: Thomas Nagel

[10] This man denied the reality of subjective "raw feels" in "Quining Qualia." He likens consciousness to demons in Pandaemonium, or the revising of data in "multiple drafts," and *not* to sequential projections in a "Cartesian theater."

ANSWER: Daniel Clement Dennett

9. As a captain during the Mexican-American War, this man led the Ninety Six Guards of the Palmetto Regiment. For 10 points each:

[10] Name this politician who was angered by a speech that he saw as "a libel on South Carolina" and his cousin Andrew Butler.

ANSWER: Preston Smith Brooks

[10] This Massachusetts senator was beaten with a cane by "Bully" Brooks after delivering the "Crime against Kansas" speech, in which this man spoke out against the Kansas-Nebraska Act using rape imagery.

ANSWER: Charles Sumner

[10] This Whig senator from Georgia dissuaded Laurence Keitt from attacking John Crittenden during Sumner's caning. He later helped create the Confederate Constitution and briefly served as the CSA's first Secretary of State.

ANSWER: Robert Augustus Toombs

10. The lyrics to this song include the lines "Oh, Lord, don't let them shoot us," and "Oh, Lord, no more Ku Klux Klan." For 10 points each:

[10] Name this song whose lyrics are partially sung by drummer Dannie Richmond. It appeared without lyrics along with "Goodbye Porkpie Hat" on an album partially titled *Ah Um*.

ANSWER: "**Fables of Faubus**"

[10] "Fables of Faubus" was written by this jazz musician who included tracks "Love Chant" and George Gershwin's "A Foggy Day" on his album *Pithecanthropus Erectus*.

ANSWER: Charles **Mingus** Jr.

[10] Charles Mingus played this largest string instrument. Paul Chambers also played this instrument that joins the piano for the introduction to "So What," the first track of *Kind of Blue*.

ANSWER: double **bass**

11. In this novel, John Osborne wins the Grand Prix in his Ferrari, though many of the other drivers are killed in the event. For 10 points each:

[10] Name this novel in which the submarine commander Dwight Towers buys presents for his family in America even though they are almost certainly dead. Its other characters include Moira Davidson and Peter Holmes.

ANSWER: **On the Beach**

[10] *On the Beach* is by this aeronautical engineer and novelist, who also wrote *Round the Bend*, *No Highway*, and *A Town Like Alice*.

ANSWER: Nevil **Shute** [or Nevil Shute **Norway**]

[10] Although born in England, Shute set many of his novels in this country, whose own novelists include Peter Carey and Thomas Keneally.

ANSWER: Commonwealth of **Australia**

12. Unipolar brush cells are excitatory examples of these cells which are activated by glutamate. For 10 points each:

[10] Name these neurons which often connect sensory neurons to motor neurons in the peripheral nervous system.

ANSWER: **interneurons**

[10] Interneurons amplify signals in this neural pathway. This type of "arc" occurs when a response to a stimulus occurs without the signal being sent directly from the brain. The patellar one involves a knee-jerk.

ANSWER: **reflex** arc [or a **reflex**]

[10] This other neural pathway includes the corticospinal and corticobulbar tracts and is active during voluntary muscle contraction. It shares its name with the shape of Betz cells and other neurons that have highly branched axons and dendrites.

ANSWER: **pyramidal** tract [or **pyramidal** cells; or **pyramids**]

13. This ethnicity has believed in a life force called *ashé*, which stems from their supreme deity, Olodumare. For 10 points each:

[10] Name this West African ethnicity whose pre-Christian religion included a divination ritual using palm nuts and the drum-accompanied "mounting" ritual, in which spirits called orishas could possess a person.

ANSWER: **Yoruba** people

[10] On this island, slaves of Yoruba descent blended their beliefs with Spanish Catholicism to create Santería.

ANSWER: **Cuba**

[10] In Cuba, this female saint and martyr is syncretized with Changó, the male fire and lightning orisha. This patron saint of artillery has a feast on December 4. Her father was struck by lightning for beheading her.

ANSWER: Saint **Barbara**

14. Name some composers who wrote preludes in all 24 major and minor keys, for 10 points each.

[10] This composer did not publish the 24 preludes as a unified set, but nonetheless managed to cover all the keys. His other compositions include *The Bells* and four piano concertos.

ANSWER: Sergei Vasilievich **Rachmaninoff**

[10] This man's Opus 31 consists of 24 preludes in all the major and minor keys, plus an extra one in C major. He also composed *Grand Sonata: The Four Ages* and *Le chemin de fer*.

ANSWER: Charles-Valentin **Alkan**

[10] This composer's Opus 11 is a set of 24 preludes. This synaesthete planned to write a monumental work which would bring about the end of the world, *Mysterium*.

ANSWER: Alexander Nikolayevich **Scriabin**

15. This type of imagery is built up from geometrical primitives, like lines and polygons. For 10 points each:

[10] Name this type of imagery. These images can be scaled without loss of resolution.

ANSWER: **vector** graphics

[10] By contrast, raster graphics work by specifying information about each of these entities on a bitmap grid. Their three-dimensional analogues are called voxels, and on modern displays, each one is typically broken down into red, blue, and green subcomponents.

ANSWER: **pixels**

[10] Vector graphics can be made using this technique, in which the motion of a namesake cursor on a canvas is used to draw shapes. This technique was popularized by the Logo language.

ANSWER: **turtle** graphics

16. Name some Brazilian cities, for 10 points each:

[10] This largest city of Brazil and largest in the Southern hemisphere overlooks Porto Bay.

ANSWER: **Sao Paulo**

[10] This coastal city is the Capital of Bahia. It is the third largest city in Brazil and has been known simply as Bahia for much of its existence.

ANSWER: Sao **Salvador**

[10] This coastal capital of Pernambuco is the site of the St. Joseph Market and Olinda Town Center. It is sometimes called the Venice of Brazil because of its many waterways and bridges.

ANSWER: **Recife**

17. This kingdom's Ezana I may have been its first ruler to convert to Christianity, and further work to spread Christianity in this kingdom was done by the Nine Saints. For 10 points each:

[10] Name this African kingdom that was replaced in the tenth century by the Zagwe Dynasty.

ANSWER: **Axumite** Kingdom

[10] Axum was based in the north of this modern-day country, which still has an Orthodox Christian church. The Solomonic dynasty in this country was legendarily started by Menelik I and continued through Haile Selassie.

ANSWER: Federal Democratic Republic of **Ethiopia** [or **It'op'ya** Federalawi Demokrasiyawi Ripeblik]

[10] This saint and first bishop in Axum brought Christianity to the kingdom in the fourth century. He and Aedesius may have arrived in Axum at a young age after being shipwrecked.

ANSWER: **Frumentius**

18. This alias is taken from the name of an island which provides Edmond Dantes the riches he needs to exact his revenge. For 10 points each.

[10] Name this alias which titles a novel by Alexandre Dumas.

ANSWER: the **Count of Monte Cristo**

[10] Dantès also adopts the name of this legendary character, who defeats the Old Man of the Sea.

ANSWER: **Sinbad** the Sailor

[10] A chief target of the revenge of the Count is this prosecutor, who condemns Edmond to the Chateau d'If to avoid implicating the treason of his father.

ANSWER: Gerrard de **Villefort**

19. For 10 points each, name some French sociologists.

[10] This man's *Rules of the Sociological Method* outlines his ideas on "social fact." He also wrote *The Division of Labor in Society* and *Suicide*.

ANSWER: Emile **Durkheim**

[10] This author of *Distinction* developed the concepts of cultural capital and habitus.

ANSWER: Pierre **Bourdieu**

[10] This Marxist divided "space" into the perceived, the conceived, and the lived, in his book *The Production of Space*.

ANSWER: Henri **Lefebvre**

20. William Skeffington put down a rebellion against Henry VIII on this island that was started by Silken Thomas in 1534. For 10 points each:

[10] Name this island invaded a century later by Oliver Cromwell, whose Protestant forces massacred the

inhabitants of Wexford on this mostly-Catholic island west of England.

ANSWER: **Ireland** [or **Eire**]

[10] In 1495, Henry VII had Ireland placed firmly back under English control through this law, whose namesake he had made Lord Deputy of Ireland the year before.

ANSWER: **Poynings**'s Law

[10] Poynings's Law is sometimes named the Statute of this Irish city. Like Wexford, this city experienced a Cromwell massacre, during which its commander Arthur Aston was bludgeoned to death by his own wooden leg.

ANSWER: **Drogheda**