1. **The arrangement of these things was the subject of Michel Chevreul's** [mee-shel shev-rahl's] **"law of simultaneous contrast." These things were put on a "sphere" by Philipp Otto Runge** [RUN-guh] **after correspondence with an author who proposed a "theory" of them in his book *Zur Farbenlehre*** [FAR-ben-leh-ruh]**. An "additive" method for the (*)** "mixing" of these things is commonly known by the initialism "RGB." For 10 points—what things appear on a "wheel" including primary ones such as blue?

answer: colors (accept color sphere or color wheel or Theory of Colors or primary colors; accept farben or Zur Farbenlehre before "Farbenlehre")

<559590>

1. According to Plutarch [PLOO-tark], this object—having been removed—was used as a prop representing Pentheus in a performance of *The Bacchae* ["BACK"-ee]. For 10 points each—

A. Name this object. Molten gold was legendarily poured into an orifice of this object as a mockery of greed and wealth following Surena's [soo-RAY-nuh'z] decisive victory in a 53 BC battle.

answer: head of Crassus ["CRASS"-uss] (or Marcus Licinius Crassus's head (or skull or cranium); accept all answers indicating Marcus Licinius Crassus and the notion of a head or equivalent; prompt on answers that only specify "a head" or equivalent alone and do not mention Crassus; do not accept or prompt on answers indicating a "mouth" or "throat")

B. Crassus was killed following this battle, in which a Parthian army destroyed seven Roman legions.

answer: Battle of Carrhae [KAR-ee]

C. The death of Crassus ended the First Triumvirate ["try"-UM-vih-rut], which also included Pompey [PAHM-pee] and this man who conquered Gaul and was assassinated on the Ides of March.

answer: (Gaius) Julius Caesar (accept either underlined portion)

<470573>

2. **This organization demanded a provision of indemnity in the "Solemn Engagement." The Earl of Essex was prevented from leading this force by the Self-Denying Ordinance. Men opposed to this force were removed from office in Pride's Purge. Thomas (*)** Fairfax led this group to victory at Naseby [NAYZ-bee] against Charles I ["the first"]. Oliver Cromwell was a cavalry commander in—for 10 points—what Roundhead army that won the First English Civil War?

answer: New Model Army (prompt on "parliamentary army" or "Parliamentarian army"; prompt on "Roundhead(s)" before "Roundhead")

<495636>

2. Andrei Linde [LIN-deh] has argued that the structure of the universe can be described by this type of shape. For 10 points each—

A. The Mandelbrot [man-dul-brawt] set is an example of what self-similar shapes?

answer: <u>fractal</u>s

B. According to Linde, this process may create a self-reproducing fractal universe. The epoch of this extremely rapid process is proposed to have lasted for 10^{-36} ["ten-to-the-negative–36"] seconds after the Big Bang.

answer: cosmic <u>inflation</u> (accept <u>inflation</u>ary epoch)

C. Other physicists have argued that inflation explains why the universe has this property, defined as appearing the same in all directions.

answer: <u>isotropy</u> ["eye"-SAH-truh-pee] (or <u>isotrop</u>ic ["eye"-suh-TRAH-pik]; do not accept or prompt on "anisotropic")

<560621>

3. **A population of cells from this tissue with stem cell properties is called the stromal vascular fraction. The protein HSL** ["H-S-L"] **"mobilizes" the contents of this tissue, which regulates its composition by secreting the hormone (*)** leptin [LEP-tin]. Because infants can't shiver, they are born with sizeable amounts of this tissue's "brown" form behind their shoulders. Obesity is an excess of—for 10 points—what tissue that stores lipids?

answer: <u>fat</u> (or <u>adipose</u> tissue)

<534002>

3. In 2016 three of this man's sons, all under age 12, competed in an illegal televised MMA match. For 10 points each—

A. Name this "head" of a European republic who, since 2017, has denied that his regime imprisons LGBT people in concentration camps. In March 2022 Vladimir Putin made him a lieutenant general.

answer: Ramzan (Akhmadovich) <u>Kadyrov</u> [rahm-ZAHN kah-DEE-roff]

B. Kadyrov is the head of this majority-Muslim republic in the Caucasus, which Russia regained control of in a 2003 war. Its capital is Grozny [GROHZ-nee].

answer: <u>Chechnya</u> [CHECH-nee-ah] (or <u>Chechen</u> Republic or <u>Chechenskaya</u> Respublika or <u>Noxçiyço</u> or <u>Noxçiyn</u> Respublika)

C. Kadyrov claimed Chechnya did not have any gay people in a 2017 interview with this journalist, who hosts the HBO series *Real Sports*. His brother Greg is also a sportscaster.

answer: Bryant (Charles) <u>Gumbel</u> (accept <u>Real Sports with Bryant Gumbel</u>)

<520973>

4. **This country controls the *western* half of the island of Usedom** [OO-seh-dom]**, the site of many nudist beaches. This country planned to build the colossal beach resort of Prora as part of its state-sponsored "Strength Through Joy" program. The island of (*)** Rügen [RUR-ghen] is controlled by this country, which allowed North Sea shipping to bypass Jutland [YOOT-lund] by building the Kiel Canal. For 10 points—name this country where the Elbe [EL-buh] flows past Hamburg [HAHM-boorg].

answer: <u>Germany</u> (or Federal Republic of <u>Germany</u> or Bundesrepublik <u>Deutschland</u>; accept Nazi <u>Germany</u>)

<553084>

4. In 2010 this country's former president Evo Morales [AY-voh moh-RAH-lays] declared it to be a "plurinational state." For 10 points each—

A. Name this landlocked South American country that shares Lake Titicaca [tee-tee-KAH-kah] with its western neighbor.

answer: <u>Bolivia</u> (or Plurinational State of <u>Bolivia</u> or Estado Plurinacional de <u>Bolivia</u>)

B. The Pirai [pee-RYE] River flows through this city in the country's central eastern lowlands, Bolivia's most populous. Its full name includes "de la Sierra."

answer: <u>Santa Cruz</u> de la Sierra

C. Bolivia's population includes around 3 million Quechua [KESH-wuh] people and over 1.5 million of these indigenous people, of which Evo Morales is a member.

answer: <u>Aymara</u> ["eye"-MAR-uh] (or <u>Aimara</u>)

<511172>

5. **This poem mentions a "valley of dying stars" where "there are no eyes."   In its last section, stanzas are interspersed with the italicized** [ih-TAL-uh-"sized"] **words "for Thine is the Kingdom."   This poem alters a nursery rhyme to state "here we go (*)** round the prickly pear."   The "kingdoms" of Death are described in this poem, which claims the world will end "not with a bang but a whimper."   T. S. Eliot wrote—for 10 points—what poem about empty people?

answer: The <u>Hollow Men</u>

<559615>

5. This city was the capital of the princely state of Awadh [ah-wahd] before its annexation by the British East India Company.   For 10 points each—

A. Identify this city where the Indian National Congress and the Muslim League signed a short-lived namesake cooperation pact in 1916.

answer: <u>Lucknow</u> ["LUCK-now" or LAHK-"now"] (or <u>Lakhnau</u>)

B. Henry Lawrence died during a siege of the British Residency in Lucknow during this conflict sparked by the introduction of greased rifle cartridges.

answer: <u>Sepoy</u> Rebellion (or <u>Sepoy Mutiny</u> or <u>Indian Rebellion</u> of 1857 or <u>Indian Mutiny</u> of 1857 or <u>Rebellion of 1857</u> or <u>Revolt of 1857</u> or <u>Uprising of 1857</u>)

C. Lucknow is today the capital of this most populous state in India.   This state's chief minister is Yogi Adityanath [YOH-gee uh-DEET-yuh-nath].

answer: <u>Uttar Pradesh</u> [OO-tar PRAH-desh]

<426995>

6. **After Spain re-occupied this country with help from Pedro Santana, rebels began its War of Restoration. Desiderio Arias** [day-zee-DAIR-ee-oh AH-ree-ahss] **forced the resignation of this country's president Juan Isidro Jimenes** [wahn ee-SEE-droh hee-MEH-nez] **in 1916, leading the U.S. to occupy it.   This country's military killed over 12,000 people asked to say the word (*)** *perejil* ["pay-ray-HEEL"] in the anti-immigrant Parsley Massacre.   Rafael Trujillo [troo-HEE-yoh] once governed—for 10 points—what country on Hispaniola?

answer: <u>Dominican Republic</u> (or <u>República Dominicana</u>; prompt on "DR"; do not accept or prompt on "Dominica")

<484135>

6. This opening sentence is followed by a paragraph that describes a "great python" spitting "venomous kerosene." For 10 points each—

A. What six-word sentence begins a novel about the fireman Guy Montag?

answer: <u>It was a pleasure to burn</u>.

B. "It was a pleasure to burn" opens this novel by Ray Bradbury titled for the temperature at which books catch fire.

answer: <u>Fahrenheit 451</u>

C. At the end of *Fahrenheit 451*, Montag recites a verse about a "tree of life" whose leaves are for "healing the nations" drawn from this book of the New Testament.

answer: Book of <u>Revelation</u> (of Saint John the Divine) (accept <u>Apocalypse of John</u> or <u>Revelation</u> to John; do not accept or prompt on "Revelations")

<494507>

7. **In this field of study, the theory of structuration was advanced by Anthony Giddens.   An 1895 text that argues for applying the scientific method to the study of discrete "facts" is titled for "rules" of this field's "method."   The structural functionalist approach to this discipline was advocated by (*)** Émile Durkheim [ay-MEEL dur-kem], who practiced this field along with Erving Goffman and Max Weber [VAY-bur].   For 10 points—name this study of society.

answer: <u>sociology</u> [soh-see-AH-luh-jee] (or <u>sociological</u> study or method; accept <u>New Rules of Sociological Method</u> or <u>Rules of Sociological Method</u>)

<559806>

7. In 2018 this player broke the record for having played the most career games before his first MLB All-Star appearance.   For 10 points each—
A. Name this outfielder of Greek descent who played from 2015 to 2020 with the Braves.   He retired before the 2021 season.
answer: Nick Markakis [mar-KAY-cuss] (or Nicholas William Markakis)
B. Markakis was drafted by, and spent nine seasons with, this AL East team from Maryland.
answer: Baltimore Orioles (accept either underlined portion; prompt on "O's")
C. Upon joining the Braves, Markakis adopted number 22, which this five-time Gold Glove winner vacated when he joined the Cardinals.   Since 2016 this former Rookie of the Year has played for the Cubs.
answer: Jason (Alias) Heyward

<465255>

8. **This film's villain quips "that wasn't very sporting, using real bullets" after his henchman is shot.   A photograph shows this film's protagonist grabbing a knife that killed diplomat Lester Townsend.   After being mistaken for the fake (*)** spy George Kaplan in this film, Roger Thornhill is chased in a field by a crop-dusting plane.   Cary Grant stars in—for 10 points—what Alfred Hitchcock film featuring a chase on Mount Rushmore?
answer: North by Northwest

<514945>

8. Pencil and paper ready. Consider a dihybrid ["die-hybrid"] cross between two pea plants, one with round, yellow seeds and the other with wrinkled, green seeds.   For 10 points each—
A. The genotypes [JEEN-uh-"types"] of the resulting offspring can be visualized by drawing what kind of "square" named for a British geneticist?
answer: Punnett [PUN-it] square (accept R(eginald) C(rundall) Punnett)
B. Given that the round-seed and yellow-seed alleles [uh-LEELZ] are dominant, what proportion of the offspring will have round, yellow seeds?   You have 10 seconds.
answer: 9/16 or 0.5625 [The dominant phenotype occurs if at least one allele is dominant, with a probability of 1 - ((1/2) × (1/2)) = 1 - 1/4 = 3/4.   Since both traits are independent, the overall probability is 3/4 × 3/4 = 9/16.]
C. What proportion of the offspring will have wrinkled, green seeds, given that both traits are recessive?
answer: 1/16 or 0.0625 [The recessive phenotype only occurs if both inherited alleles are recessive, with a probability of 1/2 × 1/2 = 1/4.   Since both traits are independent, the overall probability is 1/4 × 1/4 = 1/16.]

<552380>

9. **In a 1940s play a prostitute from this country adopts a male alter ego to protect herself after being favored by the gods.   Bertolt Brecht drew his concept of the "distancing effect" from this country, and adapted its 14th-century play *Circle of Chalk*.   This country briefly permitted (*)** dissident literature during the "Hundred Flowers Campaign."   For 10 points—what country is the setting of Brecht's *The Good Person of Szechwan* [SETCH-wahn]?
answer: China (or People's Republic of China or PRC or Zhongguo or Zhonghua Renmin Gongheguo; do not accept or prompt on "Republic of China") [The first sentence refers to Brecht's play *The Good Person of Szechwan*.]

<436455>

9. For 10 points each—answer the following about the Oregon Trail:
A. The trail formally began in Independence, a town in this state.   This state's Gateway Arch honors western expansion.
answer: Missouri (accept MO ["M-O"])
B. Settlers who traveled the trail often stopped at this major fort in Wyoming, located where its namesake river meets the North Platte River.
answer: Fort Laramie ["LAIR"-uh-mee] (accept Laramie River)
C. The trail ended in this fertile valley in Oregon, home to the cities of Salem, Eugene, and Portland.
answer: Willamette [wil-LAM-et] Valley

<504247>

10. **The borders of these regions are below the ascending portion of the Ferrel** ["FAIR"-ul] **cells.   Noctilucent** [NOK-tuh-LOO-sint] **clouds are seen primarily above these geographic regions, whose namesake stratospheric clouds are also called "nacreous"** [NAY-kree-uss] **due to their colorful appearance.   Jet stream (*)** meanders result from the weakening of a namesake "vortex" of low-pressure air that circles—for 10 points—what regions where auroras may be seen over the ice caps?

answer: <u>polar</u> regions (or <u>circumpolar</u> regions; or <u>poles</u>; accept descriptive answers such as <u>above the Arctic Circle and below the Antarctic Circle</u>; accept <u>polar</u> stratospheric clouds)

<405679>

10. For 10 points each—answer the following about the proposed colony of Vandalia [van-DAY-lee-uh]:

A. Vandalia would have occupied the land just south of this river, which also marked the southern boundary of the Northwest Territory.

answer: <u>Ohio</u> River

B. Vandalia was named in honor of this wife of George III ["the third"], who was thought to be a descendant of ancient Vandal tribesmen.

answer: Queen <u>Charlotte</u> (or <u>Charlotte</u> of Mecklenburg-Strelitz)

C. Vandalia's lands eventually became part of West Virginia and this other state, which was represented in the senate by Henry Clay.

answer: <u>Kentucky</u> (or Commonwealth of <u>Kentucky</u>; accept <u>KY</u> ["K-Y"])

<504648>

11. **During SETI** [SEH-tee] **observations of this star in 2019, the radio signal BLC1 was detected.   In 2019 Meredith MacGregor observed unprecedented millimeter-range flares coming from this star.   In April 2020 the *New Horizons* probe took images of Wolf 359 and this star.   In 2020 the (*)** "d" exoplanet orbiting this star was discovered about four light-years from Earth.   For 10 points—name this nearest known extra-solar star to the Earth.

answer: <u>Proxima Centauri</u> (or <u>Alpha Centauri C</u>; prompt on "Alpha Centauri")

<556285>

11. For 10 points each—answer the following about the atmosphere of Mars:

A. The thin atmosphere of Mars is made largely of this gas, whose year-average concentration in Earth's atmosphere hit a record 416 parts per million in 2021.

answer: <u>carbon dioxide</u> or <u>CO_2</u> ["C-O two"]

B. Nanophase compounds in which these *two* elements are bonded contribute to the reddish haze of Mars's atmosphere, and the color of its surface.   Give *both* elements.

answer: <u>iron</u> (or <u>Fe</u>)
<u>oxygen</u> (or <u>O</u>) (accept answers in either order; accept <u>ferric oxide</u> as a substitute for both answers; do not accept or prompt on partial answers)

C. About 2 percent of Mars's atmosphere consists of this gas, which is used along with potassium in a method of radioactive dating that does not involve carbon.

answer: <u>argon</u> (or <u>Ar</u>; accept potassium-<u>argon</u> dating)

<405631>

12. **This town was where the first issues of *The Lily*, the first woman-edited newspaper in the U.S., were printed. While living in this town, Amelia Bloomer popularized the women's garment now called "bloomers."   In this town, a two-day (*)** conference partly organized by Elizabeth Cady Stanton produced the Declaration of Sentiments.   For 10 points—what upstate New York town hosted a landmark 1848 women's rights convention?

answer: <u>Seneca Falls</u>, New York (accept <u>Seneca Falls</u> Convention or <u>Seneca Falls</u> Conference)

<558028>

12. In *A Room of One's Own*, Virginia Woolf claimed that this author earned womankind "the right to speak their minds." For 10 points each—

A. Name this Restoration author of the play *The Rover*, who often wrote under the pseudonym Astrea [uh-STRAY-uh].

answer: Aphra <u>Behn</u> [AA-fruh BEN]

B. Behn's 1688 work *Oroonoko* [OH-roo-NOH-koh] is one of the earliest examples of this literary form in English, other examples of which include *Robinson Crusoe* and *Pamela*.

answer: <u>novel</u>s

C. Among Behn's literary friends was this playwright of *All for Love* and *Marriage á la Mode*. He became England's first poet laureate in 1668.

answer: John <u>Dryden</u>

<501449>

13. **In this country, girls wear red and white *martenitsa* [mar-TAY-neet-sah] threads on March 1, Baba Marta day. From top to bottom, the three horizontal stripes on this country's flag are white, green, and red. A dissident from this country, Gyorgy (*)** Markov, was killed by a ricin pellet fired from an umbrella. This country's yogurt is usually less thick than that of neighboring Greece. For 10 points—what Balkan nation's capital is Sofia?

answer: <u>Bulgaria</u> (or Republic of <u>Bulgaria</u> or Republika <u>Balgariya</u>)

<557864>

13. This composer led the "Second Viennese School," which included Alban Berg and Anton Webern [VAY-burn]. For 10 points each—

A. Name this Austrian composer who developed the twelve-tone method for composition in the 1920s.

answer: Arnold (Franz Walter) <u>Schoenberg</u> [SHURN-bairg]

B. Schoenberg's composition *Transfigured Night* calls for an ensemble of this many string players, one more than the number of lines in a staff.

answer: <u>six</u> (accept string <u>sextet</u>)

C. Schoenberg's Second String Quartet unusually calls for one of these musicians in its third and fourth movements. One of these musicians is accompanied by an orchestra in Schoenberg's *Erwartung* ["air"-VAR-toong].

answer: <u>vocal</u>ist or <u>singer</u> (accept <u>soprano</u>; accept clear equivalents indicating a <u>vocal</u> performer or someone who <u>sings</u>)

<497623>

14. **In a theory of this phenomenon that takes path integrals over a "spin foam," space is quantized on the Planck scale. This phenomenon is mediated by a hypothetical massless spin–2 gauge boson [gayj BOH-zahn]. Adding an explanation of this phenomenon to (*)** Grand Unified Theory would produce a "theory of everything." General relativity explains—for 10 points—what fundamental force that causes attraction between massive objects?

answer: <u>gravity</u> or <u>gravitation</u>al force (accept loop quantum <u>gravity</u>)

<534563>

14. A philosopher who wrote in this language argued for the existence of God using the "proof of the truthful." For 10 points each—

A. Name this language used by Avicenna [AH-vuh-SEH-nuh], who wrote during the first half of the 11th century.

answer: <u>Arabic</u>

B. Avicenna argued for the existence of the soul with a thought experiment about this type of "man," who has self-knowledge despite not having any sense-perceptions.

answer: <u>floating</u> man (accept <u>flying</u> man or <u>falling</u> man or answers referring to a man who is <u>suspended</u> in air)

C. Avicenna wrote an encyclopedic "canon" of this discipline, which was influenced by Galen's [GAY-len'z] work in this area.

answer: <u>medicine</u> (accept <u>medical</u> science or <u>healing</u>; accept The <u>Canon of Medicine</u>)

<501025>

15. **A man in this play complains about not having his toothbrush after noticing there are no mirrors nearby. This play ends with a character remarking "Let's get on with it." A valet with no eyelids brings people to a room of (*)** Second Empire-style furniture in this play, in which Estelle reveals she killed her child resulting from an affair. Garcin [gar-san] remarks "hell is other people" in—for 10 points—what play by Jean-Paul Sartre [sar-truh]?

answer: No Exit (or Huis Clos [wee kloh]; accept In Camera or No Way Out or Dead End)

<560914>

15. After France's defeat at the Battle of Rossbach [ROSS-bahk], this woman reportedly comforted the king by saying, "After us, the deluge."   For 10 points each—

A. Name this woman whose abilities as a royal advisor secured her place at the French court even after her time as official mistress ended in 1751.

answer: Madame de Pompadour [PAWM-puh-DOOR] (or Jeanne Antoinette Poisson)

B. Madame de Pompadour served this king, who reigned until 1774.   His grandson—who shared his regnal name, but was one number higher—was guillotined in 1793.

answer: Louis XV [LOO-ee "the 15th"] of France (accept Louis the Beloved or Louis le Bien Aimé; prompt on "Louis")

C. In 1756 Louis and Madame de Pompadour allied France with Austria, part of this realignment of European alliances in the wake of the War of the Austrian Succession.

answer: Diplomatic Revolution (prompt on "stately quadrille")

<495086>

16. **Expanding this system was the primary goal of the Program for Action created by John Lindsay.   This system uses circles and diamonds to distinguish between local and express services.   Massimo Vignelli** [veen-YELL-ee] **created an iconic modernist (*)** map for this system that was first operated by the IRT company, which built the 1 and 2 lines to South Ferry.   For 10 points—what public transit system stops at Grand Central and Times Square?

answer: New York subway (system) (or New York City subway; accept New York subway (system) map; accept metro in place of subway; prompt on "subway" by asking "where?"; prompt on "MTA" or "New York railroads" or "New York public transportation")

<534765>

16. A speedrunning technique in this game called "divine travel" locates endgame structures using the random placements of fossils or animals.   For 10 points each—

A. Name this sandbox game developed by Mojang.

answer: Minecraft (accept Minecraft: Java Edition)

B. *Minecraft* speedrunners must find a stronghold and enter the End dimension before battling this creature, which functions as the "final boss" of the game.

answer: Ender [IN-dur] dragon (prompt on "dragon" or "Ender" alone)

C. Instead of building them the usual way, *Minecraft* speedrunners usually "cast" these structures using water and lava buckets.

answer: Nether [NEH-thur] portals (or Nether portal frames; prompt on "portal(s)" or "portal frame(s)")

<539148>

17. **In 2022 a former president of this country was convicted** *in absentia* **of murdering his leftist predecessor in 1987.   The Patriotic Movement for Safeguard and Restoration led a 2022 coup** [koo] **in this Mooré** [moo-ray]**- and French-speaking country, causing its suspension from ECOWAS** ["ECHO"-woss] **and the African Union.   In 1987 (*)** Blaise Compaoré [kom-pow-ray] toppled and killed Thomas Sankara in—for 10 points—what landlocked West African country led from Ouagadougou [hwa-gah-DOO-goo]?

answer: Burkina Faso [bur-KEE-nah FAH-soh]

<559113>

17. Pencil and paper ready.   For 10 points each—answer these questions about the parabola [puh-RAB-uh-luh] defined by the equation *y* equals *x* squared minus 2*x*:

A. What is the *x*-coordinate of the parabola's vertex?

answer: x = <u>1</u> (accept (<u>1, –1</u>)) [*x* = -*b*/2*a* = -(–2)/(2 × 1) = 2/2 = 1]

B. One of the two roots of the parabola is at the origin.   What is the *x*-coordinate of the other root?

answer: x = <u>2</u> (accept (<u>2, 0</u>)) [Roots occur where *y* = 0, so 0 = *x*² - 2*x*, so 0 = *x*(*x* - 2), so *x* = 0 or *x* - 2 = 0, and *x* = 0 or *x* = 2.]

C. What is the area of the region that lies above the parabola and *below* the *x*-axis?   You have 10 seconds, and should recall the roots are at zero and 2.

answer: <u>4/3</u> or <u>1 1/3</u> (accept <u>–4/3</u> or <u>–1 1/3</u>) [Int(*x*² - 2*x*) = *x*³/3 - *x*², so, from *x* = 0 to *x* = 2, ((2³/3) - 2²) - ((0³/3) - 0²) = ((8/3) - 4) - 0 = (8/3) - (12/3) = –4/3; the negative sign indicates the region is below the *x*-axis.]

<502190>

18. **A set of these artworks, which appear in the background of John Singleton Copley's** [COP-lee's] **painting *The Death of the Earl of Chatham* [CHAT-um], depicted the British defeat of the Spanish Armada.   The first known depiction of Halley's Comet appears in one of these artworks that was likely commissioned by (*)** Odo for his half-brother, who won the Battle of Hastings.   For 10 points—identify these woven artworks, one of which is named for Bayeux [bye-yoo].

answer: <u>tapestries</u> (accept Armada <u>Tapestries</u> or Bayeux <u>Tapestry</u>; prompt on "embroidery" or "textile(s)")

<516274>

18. María Josefa [hoh-SAY-fah] warns this play's title character that her daughters' hearts will turn to dust if they are not set free.   For 10 points each—

A. Name this play in which Angustias [ahn-GOO-stee-us] plans to marry Pepe el Romano [PAY-pay el roh-MAH-noh], who never appears on stage.

answer: The <u>House of Bernarda Alba</u> (or La <u>Casa de Bernarda Alba</u>)

B. *The House of Bernarda Alba* is part of this playwright's "Rural Trilogy."

answer: Federico <u>García</u> <u>Lorca</u> (or Federico (del Sagrado Corazón de Jesús) <u>García</u> <u>Lorca</u>; accept either underlined portion)

C. *The House of Bernarda Alba* premiered just months before Lorca's death in this country's civil war.

answer: <u>Spain</u> (or Kingdom of <u>Spain</u> or Reino de <u>España</u>)

<527010>

19. **Highlands in what is now this country were home to a 13th-century trickster commonly depicted riding backward on a donkey, the *sufi* [SOO-fee] Nasreddin Hodja [nahs-reh-DEEN HOH-jah].   This nation's city of Konya [KAWN-yah] was the capital of the Sultanate of (*)** Rum ["SULTAN-ate of room"], while in the 11th century most of its territory was conquered by the Seljuks [SEL-jooks].   For 10 points—what country's city of Edirne [eh-DEER-nuh] served as the capital of the Ottoman Empire before the fall of Constantinople?

answer: <u>Turkey</u> (or Republic of <u>Turkey</u> or <u>Türkiye</u> Cumhuriyeti)

<432597>

19. This professor's off-campus meetings during the COVID pandemic were the focus of a scandal mockingly called "Dinner-party-gate."   For 10 points each—

A. The 2018 book *Political Tribes* is by what Asian-American professor at Yale Law School?

answer: Amy (Lynn) <u>Chua</u>

B. Chua is best known for a 2011 memoir that likened Chinese-American mothers who demand perfection from their children to these big cats.

answer: <u>Tiger</u> Mother (or <u>Tiger</u> Mom; accept Battle Hymn of the <u>Tiger</u> Mother)

C. Chua's controversial book *The Triple Package* linked the upward mobility of members of this religious group with greater impulse control gained from a required two-year mission.

answer: <u>Mormon</u> church (or <u>Mormonism</u> or Church of Jesus Christ of <u>Latter-Day Saints</u> or <u>LDS</u> Church)

<537879>

20. **This ethnic group's beliefs hold that spirits enter the underworld from Cape Reinga** [RAYNG-ah]**. A mythical ancestor of these people escaped his brother's plot to drown him by summoning a whale. In another of their myths, Tane** [TAH-nay] **separates the sky father (*)** Rangi [RAHN-ghee] from the earth mother Papa. Ceremonial dances called hakas [HAH-kahz] are performed by—for 10 points—what Polynesian people, whose hero Maui [MAO-ee] fished up the North Island of New Zealand?

answer: <u>Maori</u> [MAO-ree] (do not accept or prompt on "Polynesian(s)" or "Hawaiian(s)")

<560112>

20. This style of art includes the black and white paintings of Bridget Riley. For 10 points each—

A. Victor Vasarely was a leader of what art movement that makes use of illusions? It rose to prominence with the 1965 MoMA exhibition "The Responsive Eye."

answer: <u>op</u> art (or <u>optical</u> art)

B. Op artist Wen-Ying Tsai ["sigh"] created one of these things that seems to be "upward falling." A Marcel Duchamp ["mar-SELL" doo-SHAHMP] readymade *titled* for being one of these things was signed "R. Mutt."

answer: <u>fountain</u>s (accept <u>Upward Falling Fountain</u> or <u>Fountain</u>)

C. Although not usually grouped with op art, this Dutch artist created many works based on illusions and mathematics, such as a seemingly infinite staircase in *Relativity*.

answer: M. C. <u>Escher</u> [EH-shur] (or Maurits Cornelis <u>Escher</u>)

<483387>

21. **When using this number as a base, the standard form is to avoid the sequence "11"** ["one-one"]**. This number equals twice the cosine of 36 degrees. The continued fraction "1 plus 1 over 1 (*)** plus 1 over 1" and so on equals this number. This number is the larger root of "x squared minus x minus 1" and is also the limiting ratio of consecutive Fibonacci [fib-uh-NAH-chee] numbers. "1 plus root 5 all over 2" equals—for 10 points—what supposedly "beautiful" number?

answer: <u>golden ratio</u> or <u>golden mean</u> or <u>golden number</u> (or <u>golden section</u>; prompt on "phi"; do not accept or prompt on "pi")

<560874>

21. Chelation [kee-LAY-shun] involves the bonding of these species to metal ions. For 10 points each—

A. Give this term for molecules or ions that bind to the central atom of a coordination complex.

answer: <u>ligand</u>s [LIG-und]

B. Ligands typically satisfy this man's definition of bases, as they donate electron pairs. This man's namesake "dot diagrams" are used to visualize bonding.

answer: Gilbert N(ewton) <u>Lewis</u> (accept <u>Lewis</u> base or <u>Lewis</u> dot diagram)

C. Ligands that can undergo chelation are described by this adjective, as they use more than one donor atom to bond to the central metal atom.

answer: <u>polydentate</u> ligand

<536417>

22. **This vessel and its counterpart the *Galena* engaged with on-shore batteries at Drewry's Bluff. John Ericsson designed the body of this vessel, which was commanded by John Worden. Theodore Timby created a revolving two-gun (*)** turret for this vessel, which sank in a storm off Cape Hatteras nine months after an indecisive engagement at Hampton Roads. The CSS *Virginia* fought to a draw with—for 10 points—what Union ironclad?

answer: USS <u>Monitor</u>

<557582>

22. In this novel, journalist Peter Fallow investigates a hit-and-run accident that killed a young Black man in the Bronx.   For 10 points each—

A. Name this 1987 novel that depicts the downfall of the Wall Street bond trader Sherman McCoy.

answer: The Bonfire of the Vanities

B. This author of *The Bonfire of the Vanities* wrote about the Mercury space program in *The Right Stuff*.

answer: Tom Wolfe ["wolf"] (or Thomas K(ennerly) Wolfe; do not accept or prompt on "Thomas Wolfe" or "Thomas Clayton Wolfe")

C. Wolfe's book *The Electric Kool-Aid Acid Test* is about a journey taken by the Merry Pranksters and this author of *One Flew Over the Cuckoo's Nest*.

answer: Ken Kesey (or Kenneth Elton Kesey)

<497286>

23. **A character in this novel jokes about wishing he owned "half" of an unpleasantly loud dog, so he could kill his half.   This novel was originally titled *Those Extraordinary Twins* and centered on Luigi and Angelo Capello.   This novel's protagonist uses (*)** fingerprints to prove that "Tom Driscoll" both committed a murder and was switched at birth.   For 10 points—what Mark Twain novel is titled for a lawyer who is considered stupid?

answer: Pudd'nhead Wilson (accept The Tragedy of Pudd'nhead Wilson and the Comedy of Those Extraordinary Twins) [The joke falls flat, leading the townspeople of Dawson's Landing to nickname Wilson "Pudd'nhead."]

<559189>

23. During his confirmation hearings, this man denied that he had ever read the book *The Exorcist*.   For 10 points each—

A. Name this man who claimed he was the victim of a "high-tech lynching" during hearings in which he was accused of sexual harassment by Anita Hill.

answer: Clarence Thomas

B. Thomas was testifying before the Senate Judiciary Committee, chaired at the time by this future vice president under Barack Obama.

answer: Joe Biden (or Joseph Robinette Biden Jr.)

C. Thomas was nominated to the Supreme Court by George H. W. Bush a year after Bush nominated this justice, who had previously served on the New Hampshire Supreme Court.   For lunch, this justice routinely ate an entire apple, including the core.

answer: David (Hackett) Souter [SOO-tur]

<484552>

24. **Some devices used in this technique possess projections called weirs** [weers] **and downcomers, which isolate material into many discrete equilibrium stages.   In this technique, increasing the reflux ratio produces no benefit when working with mixtures called (*)** azeotropes [AY-zee-oh-trohps].   A condenser is used to isolate "fractions" of material in—for 10 points—what chemical technique that separates a mixture based on differences in boiling point?

answer: (fractional) distillation

<560600>

24. For 10 points each—answer the following about things known by the initials "IRA":

A. During The Troubles, members of the Provisional IRA were jailed at Maze Prison in this constituent country of the U.K.

answer: Northern Ireland (or Tuaisceart Éireann or Norlin Airlann; do not accept or prompt on "Ireland" or "Republic of Ireland")

B. Contributions to an individual retirement account, or IRA, have this property in relation to taxes.   Donations to non-profits generally have this property.

answer: tax-deductible (accept all answers indicate that they can be deducted)

C. The Initiative for the Resurgence of the Abolitionist Movement is an anti-slavery group in this country that in 1981 became the last in the world to officially abolish slavery.

answer: Mauritania (or Islamic Republic of Mauritania or al-Jumhuriyah al-Islamiyah al-Muritaniyah)

<542099>