QQBC Packet 7

1. **This city's Art Deco Coit Tower sits atop a hill known for its wild parrot population. Lawrence Ferlinghetti [fur-ling-GET-tee] founded the independent City Lights bookstore in this city that contains the Castro District, one of the first gay neighborhoods in the U.S. Tens of thousands of (\*)** hippies gathered in its Haight-Ashbury [“hate” ash-berry] neighborhood during the 1967 Summer of Love. For 10 points—name this city that contains the Golden Gate Bridge.  
  
 answer: San Francisco, California  
  
 <GEO, GEO>

7. This nation's head of state is known as the Druk Gyalpo [DROOK g'YAL-poh], or “dragon king.” For 10 points each—  
  
 A. Name this mountainous Himalayan nation that lies east of Nepal.  
  
 answer: (Kingdom of) Bhutan [boo-TAHN] (or Druk Yul or Druk Gyalkhap)  
  
 B. Bhutan lies south of this disputed Chinese region in the Himalayas, which was traditionally ruled by the Dalai Lama [DAH-“lie” LAH-muh].  
  
 answer: Tibet (or Bod or Xizang [shee-zahng] (Autonomous Region))  
  
 C. The current dragon king, Jigme Wangchuck [JIG-mee WAHNG-chook], rules from this capital of Bhutan.  
  
 answer: Thimphu [tim-POO]  
  
<GEO, GEO>

2. **During one campaign on this river, a brigade of black soldiers successfully defended Milliken's Bend while Nathaniel Banks besieged Port Hudson to the south. This river was overlooked by Fort Pillow, where black soldiers were massacred by (\*)** Nathan Bedford Forrest's troops. John C. Pemberton's 1863 surrender of a fortress along this river cut the Confederacy in two. For 10 points—name this river defended by Vicksburg.  
  
 answer: Mississippi River  
  
 <HIST, AMER>

9. It is also called the principle of buoyancy. For 10 points each—  
  
 A. Name this principle that states that when an object is submerged in a fluid, it is pushed up by a force equal to the weight of the fluid that the object pushed out of the way.  
  
 answer: Archimedes' principle  
  
 B. For fluids other than water, the buoyant force can be calculated using this quantity, the ratio of the density of the fluid to the density of water.  
  
 answer: (true) specific gravity  
  
 C. The density, in turn, is calculated as this quantity divided by a volume.  
  
 answer: mass  
  
 <SCI, PHYS>

3. **In one novel by this author, men from Ruby, Oklahoma attack “the Convent,” where they ”shoot the white girl first.” This author of Paradise wrote a novel in which the failure of marigold seeds to sprout foreshadows the death of Pecola Breedlove's baby. Another novel by this author depicts a mother who uses an (\*)** ice pick to kill a child pursued by slave catchers. For 10 points—name this author of The Bluest Eye and Beloved [buh-LUV-ud].  
  
 answer: Toni Morrison (or Chloe Ardelia Wofford)  
  
 <LIT, AMER>

1. For 10 points each—answer the following about nuclear programs:  
  
 A. What country's nuclear arsenal was the subject of an accidental leak of its “oceanic multi-purpose Status-6 system” on a state television broadcast?  
  
 answer: Russia (or Russian Federation or Rossiya or Rossiyskaya Federatsiya)  
  
 B. This country's arsenal was discussed at a summit between Kim Jong Un and U.N. Secretary-General Ban Ki-Moon.  
  
 answer: North Korea (or Democratic People's Republic of Korea or DPRK or Choson-minjujuui-inmin-konghwaguk; prompt on “Korea”; do not accept or prompt on “Republic of Korea”; do not accept or prompt on “South Korea”)  
  
 C. There has been debate in this country as to whether to close the Faslane base of its Trident program, an idea that Ed Miliband opposes.  
  
 answer: United Kingdom of Great Britain and Northern Ireland or U.K. (accept any underlined portion; do not accept or prompt on “England”)  
  
 <CE, CE>

4. **In January 2016, Chinese dissident journalist Li Xin [lee shin] went missing in this nation from which Chinese officials also abducted bookseller Gui Minhai [gwee min-HYE]. In August 2015, a bomb exploded at the Erawan Shrine in this nation's capital. Prayut [PRY-oot] Chan-o-cha assumed its prime ministership following a 2014 coup [koo] that ousted (\*)** Yingluck Shinawatra [yeeng-luk shih-nah-WAHT]. Rama IX [RAH-mah “the ninth”] is the king of—for 10 points—what southeast Asian nation whose capital is Bangkok?  
  
 answer: (Kingdom of) Thailand (or Prathet Thai or Ratcha Anachak Thai)  
  
 <CE, CE>

5. This enlightened despot acquired the region of Silesia [sih-LEE-zhuh] in the War of the Austrian Succession. For 10 points each—  
  
 A. Name this 18th-century Prussian king who was known as “the Great.”  
  
 answer: Frederick the Great (or Frederick II of Prussia or Friedrich der Grosse or Friedrich II of Prussia)  
  
 B. A decade after the War of the Austrian Succession, Frederick the Great led Prussia through this other international war, whose North American phase was called the French and Indian War.  
  
 answer: Seven Years' War  
  
 C. Frederick the Great was part of this royal dynasty that ruled Germany until 1918.  
  
 answer: House of Hohenzollern [hoh-en-ZAH-lurn]  
  
<HIST, EURO>

5. **In one novel by this author, a note that compares “the world” to an egg destroyed by a hatching bird inspires the narrator to investigate a deity that is “both god and devil.” This author who wrote about the followers of Abraxas in a “story of Emil Sinclair's Youth” titled Demian [DEE-mee-un] also wrote a novel about an (\*)** Indian Brahmin who follows the Buddha to seek enlightenment. For 10 points—name this German-born author of Siddhartha [sih-DAR-tuh].  
  
 answer: Hermann (Karl) Hesse [HESS-uh]  
  
 <LIT, EURO>

3. The word ”mayonnaise” is thought to have originated from the city of Mahón on this archipelago. For 10 points each—  
  
 A. Name this archipelago that includes the island of Ibiza [ih-BEE-zuh], which is famous for its nightclubs, as well as its largest island of Majorca [“my-YOUR”-kuh].  
  
 answer: Balearic Islands  
  
 B. The Balearic Islands are part of this European nation, whose capital is Madrid.  
  
 answer: (Kingdom of) Spain (or Reino de España)  
  
 C. Spain also controls this other archipelago off the coast of Africa, whose islands include Tenerife [ten-uh-REEF-ay]. Its name refers to a native population of animals presumed to be dogs.  
  
 answer: Canary Islands (or Canaries or Islas Canarias)  
  
 <GEO, GEO>

6. **The Morse Museum's collection of this artist's works includes his chapel interior for the 1893 World's Columbian Exposition. This artist used the term Favrile [fahv-REEL] to describe his blown and shaped works, while many of his leaded works display a dragonfly or floral motif. Tree of Life was the last (\*)** window this artist designed. Stained glass was a medium of—for 10 points—what Art Nouveau [art noo-VOH] designer of namesake lamps?  
  
 answer: Louis (Comfort) Tiffany (accept Tiffany lamps after “lamps”)  
  
 <FA, OTHER>

3. This man's historical operas include The Coronation of Poppea, which is set during the reign of Nero. For 10 points each—  
  
 A. Name this Italian Baroque composer, whose other works include The Return of Ulysses and L'Arianna [lar-ee-AH-nah].  
  
 answer: Claudio (Giovanni Antonio) Monteverdi  
  
 B. Claudio Monteverdi composed the first opera that is still frequently performed, which is named for this Greek musician who visits the underworld to try to bring his wife Eurydice [yoo-RID-uh-see] back to life.  
  
 answer: Orpheus (accept L'Orfeo or La favola d'Orfeo)  
  
 C. The earliest English opera still commonly performed is this composer's Dido and Aeneas [DYE-doh and uh-NEE-iss].  
  
 answer: Henry Purcell  
  
 <FA, AUDIO>

7. **The speed of sound in one of these substances equals the square root of the product of the adiabatic index and pressure divided by its mass density. An equation modeling these substances fails at high pressures and low temperatures because it does not account for (\*)** intermolecular forces or the volume of molecules. The equation PV equals nRT [“P-V equals N-R-T”] models—for 10 points—what theoretically perfect gases?  
  
 answer: ideal gases (accept ideal after “gas”; accept perfect gases before “perfect”; prompt on “gas(es)” before “gases”; do not accept or prompt on “real gase(es)”)  
  
 <SCI, CHEM>

4. This actress co-starred with Will Ferrell in the 2015 TV movie A Deadly Adoption, which parodied Lifetime movies. For 10 points each—  
  
 A. Name this writer and star of Bridesmaids, who branched out into drama with 2014's The Skeleton Twins.  
  
 answer: Kristen (Carroll) Wiig [wig]  
  
 B. Wiig appeared as Ben Stiller's love interest and colleague at Life magazine in this 2013 film, which was based on a short story written in the 1930s.  
  
 answer: The Secret Life of Walter Mitty  
  
 C. Wiig voices the Viking Ruffnut, who rides a Hideous Zippleback, in this animated film series about the Hairy Hooligans of Berk.  
  
 answer: How to Train Your Dragon (accept How to Train Your Dragon 2; prompt on “Dragons”)  
  
 <TRASH, POP CULT>

8. **This film's protagonists seek the Vuvalini, whose home is now a bog inhabited by stilt-walkers. In its opening scene, the title character steps on and eats a two-headed lizard. In this film, a man with a red jumpsuit and a flame-throwing (\*)** guitar joins Immortan Joe in his pursuit of the Imperator Furiosa, played by Charlize Theron. For 10 points—name this 2015 apocalyptic film starring Tom Hardy as the title character.  
  
 answer: Mad Max: Fury Road (or Fury Road)  
  
 <TRASH, POP CULT>

0. Oscar Wilde called this artist's Assumption of the Virgin “certainly the best picture in Italy.” For 10 points each—  
  
 A. Name this Italian painter of The Rape of Europa and Sacred and Profane Love.  
  
 answer: Titian [TEE-shun] (or Tiziano Vecelli or Tiziano Vecellio)  
  
 B. Titian hailed from this northern Italian city. It was also home to Canaletto, who gained his name from painting this city's most famous physical features.  
  
 answer: Venice (or Venezia)  
  
 C. The Venetian artist Tintoretto [TIN-toh-REH-toh] painted this piece, in which stars shoot from the breast of the nude Hera as she tries to push away the suckling infant Heracles.  
  
 answer: The Origin of the Milky Way  
  
 <FA, VISUAL>

9. **James Larkin mobilized a lockout strike in this city beginning in 1913, and a group of intelligence operatives sent here was called the “Cairo Gang.” In this city, a republican proclamation was made at a post office by Patrick Pearse [“purse”] during a rebellion against (\*)** British rule in 1916. For 10 points—name this capital city where the Easter Rising was masterminded by the Irish Republican Brotherhood.  
  
 answer: Dublin (or Baile Átha Cliath)  
  
 <HIST, EURO>

0. For 10 points each—name these current TV shows that feature superhumans:  
  
 A. Grant Gustin plays the title character on this show, in which Central City is repeatedly menaced by evil “meta-humans.”  
  
 answer: The Flash  
  
 B. Miko Otomo, also known as “Katana Girl,” is one of the super-powered “Evos” [EE-vohz] on this 2015 miniseries that continues an earlier show.  
  
 answer: Heroes Reborn (do not accept or prompt on “Heroes”)  
  
 C. Daisy Johnson is one of the “Inhumans” on this show that features Clark Gregg as Phil Coulson [“COAL-son”].  
  
 answer: Marvel's Agents of S.H.I.E.L.D. [“shield”]  
  
 <TRASH, POP CULT>

10. **This color appears in the name of a crime-solving dining club served by waiter Henry Jackson, created by Isaac Asimov. This color partly titles a song in which Rita Ora sings “I'm gonna love ya / Until you hate me.” This color names several North American varieties of the genus Latrodectus [LAT-roh-DEK-tuss], whose abdomens display a red (\*)** hourglass. For 10 points—name this color in the title of an Iggy Azalea song named for widow spiders.  
  
 answer: black (accept the Black Widowers or Black Widow (spiders))  
  
 <MISC., MISC.>

8. The common material in three of these four texts has led those three to be referred to as ”synoptic.” For 10 points each—  
  
 A. Give the term for these four canonical chronicles of the life of Jesus.  
  
 answer: gospels  
  
 B. This gospel, which at only 16 chapters is the shortest, is also likely the oldest. It is the only synoptic gospel not to contain an account of Jesus' birth.  
  
 answer: Gospel According to Mark  
  
 C. Modern scholarly consensus is that both Matthew and Luke based their own gospels on the Gospel of Mark, as well as a lost source of Jesus' quotes known by this single letter.  
  
 answer: Q source  
  
 <RMPSS, REL>

11. **This body of water contains the Atlantis Massif, the site of the Lost City field of alkaline hydrothermal vents. This ocean contains the wreck of the submarine USS Thresher, which was explored by the bathyscaphe Trieste [BATH-ee-skayf tree-EST] and the robot craft Argo. In this ocean, Woods Hole sponsored an expedition by Robert (\*)** Ballard to search for a ship that hit an iceberg in 1912. For 10 points—name this ocean where the Titanic sank.  
  
 answer: Atlantic Ocean (accept North Atlantic (Ocean); do not accept or prompt on any answer containing the word “south” or “southern”)  
  
 <GEO, GEO>

1. In October 2015 a 15-year-old was sentenced to potential life imprisonment, making him the U.K.'s youngest-ever convicted terrorist. For 10 points each—  
  
 A. That boy conspired online with Australian Sevdet Besim to carry out an attack on behalf of this terrorist group that controls large swaths of Syria and Iraq.  
  
 answer: Islamic State in Iraq and the Levant (or IS or ISIL or ISIS or Islamic State in Iraq and Syria or al-Dawla al-Islamiyya fi-l-'Iraq wa-l-Sham or DA'SH; accept of in place of “in”)  
  
 B. They planned to target a Melbourne observance of this annual April 25 holiday that honors veterans from both Australia and New Zealand.  
  
 answer: Anzac Day  
  
 C. Plans for the attack included painting the ISIS logo on one of these things, filling it with C4, and setting it loose in a crowd. One of these things is the logo of the airline Qantas [KWAHN-tahs].  
  
 answer: kangaroo  
  
 <CE, CE>

12. **Sandford Fleming oversaw the expansion of this industry, which included the Grand Trunk project. Pledges to add an “intercolonial” component to this industry convinced the Maritime provinces to join Canada. Bribes for contracts in this industry led to the (\*)** Pacific Scandal, which brought down John Macdonald's first government. For 10 points—name this industry that linked the Prairie Provinces to the rest of Canada.  
  
 answer: (passenger or freight) rail transport (accept railway(s); accept (trans-continental or trans-Canada or trans-Canadian) railroad(s); accept train(s) or locomotive(s) transport industry; prompt on “transportation” or “transport”)  
  
 <HIST, WORLD>

9. In the 1970s developers disastrously tried using millions of discarded car tires to construct the artificial Osborne Reef off the coast of this state. For 10 points each—  
  
 A. Name this U.S. state, where the USS Oriskany was sunk in 2006 off the coast of Pensacola to form the largest artificial reef in the world.  
  
 answer: Florida  
  
 B. In June 2015 an attempt to build a new artificial reef off the coast of Deerfield Beach, Florida, ended disastrously when a boat containing replicas of these Easter Island statues overturned.  
  
 answer: moai [moh-“eye”]  
  
 C. To create artificial reefs, this city's MTA subway service often donates its retired train cars, which once transported passengers to boroughs such as Brooklyn and Queens.  
  
 answer: New York City (or NYC)  
  
 <GEO, GEO>

13. **Economist Gordon Tullock developed the idea of “seeking” this quantity, which James Anderson claimed varied directly with the fertility of soil. Activist Jimmy McMillan criticized excessively high rates of this quantity. The songs “Without You” and “Out Tonight” appear in a Jonathan Larson musical titled for this quantity, whose other songs include (\*)** “Seasons of Love.” For 10 points—name these payments made to a landlord.  
  
 answer: Rent (accept rent-seeking or The Rent is Too Damn High)  
  
 <MISC., MISC.>

2. David Jolly and Carlos López-Cantera are candidates in the 2016 Republican primary for the U.S. Senate from Florida. For 10 points each—  
  
 A. They are running to succeed this Cuban-American Republican presidential candidate, who has declined to run to retain his seat.  
  
 answer: Marco (Antonio) Rubio  
  
 B. During his Senate tenure, Rubio has been criticized for his high rate of missing these Senate events; in response, he claimed “too many of them are not meaningful.”  
  
 answer: votes (accept forms such as voting; accept more specific answers such as votes on legislation)  
  
 C. In 2013 Rubio delivered the Republican response to Barack Obama's State of the Union address. In 2016 that response was delivered by this Republican governor.  
  
 answer: Nikki Haley (or Nimrata (Randhawa) Haley)  
  
 <CE, CE>

14. **One of this war's battles is the subject of Michael Shaara's [SHAR-uh'z] novel The Killer Angels. Historian Shelby Foote wrote a three-volume history of this war, which some critics claimed did not actively challenge the “Lost Cause” mythology surrounding it. Foote prominently appeared in a (\*)** Ken Burns documentary about this war. Two battles were fought near Manassas in—for 10 points—what war whose other battles included Gettysburg?  
  
 answer: (American) Civil War  
  
 <HIST, AMER>

3. For 10 points each—name these games with “major” and “minor” components:  
  
 A. The 2008 revised edition of this game of global conquest adds major and minor objectives; it kept the traditional bonus armies for controlling entire continents.  
  
 answer: Risk  
  
 B. This game has ten Major Improvements—like the Clay Oven—that are available to everybody; each player also has seven Minor Improvements that only he or she can build.  
  
 answer: Agricola  
  
 C. This card game divides the deck into major suits—which are spades and hearts—and minor suits; major-suit “odd tricks” score 30 rather than 20.  
  
 answer: contract bridge  
  
 <MISC., MISC.>

15. **A man in this work says that he doesn't “believe in free love” when denying Mrs. Potiphar's advances. Characters in it sing of “one more angel in heaven” after faking the protagonist's death. Its protagonist sings that “Children of Israel / Are never alone” in the song “Close Every Door,” and he sings of a (\*)** multi-hued object in “Any Dream Will Do.” For 10 points—name this Andrew Lloyd Webber musical about a son of Jacob.  
  
 answer: Joseph and the Amazing Technicolor Dreamcoat (prompt on “Joseph”)  
  
 <FA, OTHER>

3. Padparadschas [PAHD-pah-“ROD”-shahs] are pink-orange varieties of these gemstones found in Sri Lanka [shree LAHN-kuh] and Vietnam. For 10 points each—  
  
 A. Name these usually-blue corundum [kuh-RUN-dum] gemstones that are the birthstone for September.  
  
 answer: sapphire(s)  
  
 B. The Spider Sapphire Mystery is the forty-fifth installment in a young adult series about this “girl detective” who first appeared in The Secret of the Old Clock. Books about her are written under the pseudonym Carolyn Keene.  
  
 answer: Nancy Drew (accept either underlined portion)  
  
 C. The St. Edward's Sapphire appears on the top cross of one piece of this set of regalia that also includes a sceptre holding the Great Star of Africa, the largest clear, cut, and polished diamond in the world.  
  
 answer: crown jewels of the United Kingdom (or British crown jewels)  
  
 <MISC., MISC.>

16. **In 2013, Kim Kardashian tweeted her desire to learn this activity, wondering if Levon Aronian could teach her. The popularity of this activity in Armenia has led to mandatory lessons in public schools. The current world champion of this game is (\*)** Magnus Carlsen, and a computer named Deep Blue defeated Garry Kasparov in this game. For 10 points—name this board game whose goal is to checkmate the opponent's king.  
  
 answer: chess  
  
 <MISC., MISC.>

4. Pencil and paper ready. Consider the function y equals 3x plus 12. For 10 points each—  
  
 A. What is the inverse function of 3x plus 12? You have 10 seconds.  
  
 answer: y-1 = (x - 12)/3 or y-1 = x/3 - 4 or y-1 = (1/3)x - 4 [y = 3x + 12, so x = 3y-1 + 12, so x - 12 = 3y-1, and y-1 = (x - 12)/3]  
  
 B. What is the x-intercept of the original function, y equals 3x plus 12?  
  
 answer: x = -4 (or (-4, 0); do not accept or prompt on “4”) [At the x-intercept, y = 0, so 0 = 3x + 12, so -12 = 3x, and x = -4.]  
  
 C. What is the x-coordinate of the intersection point of the original function and its inverse?  
  
 answer: x = -6 (accept (-6, -6); do not accept or prompt on “6”) [3x + 12 = (1/3)x - 4, so (8/3)x = -16, and x = 16 × (-3/8) = 2 × -3 = -6; alternatively, functions intersect their inverses where they also intersect the line y = x, so 3x + 12 = x, so 12 = -2x, and x = -6.]  
  
 <SCI, OTHER>

17. **During this TV show's first season, a speech about how people are either “rats” or “snakes” was given by Susan Hawk. Former Fox & Friends host Elisabeth Hasselbeck initially appeared on TV in a season of this show set in (\*)** Australia. A 2015 iteration of this series was won by Jeremy Collins and took place in Cambodia. Jeff Probst hosts—for 10 points—what CBS reality series that strands contestants in exotic locations?  
  
 answer: Survivor  
  
 <TRASH, POP CULT>

9. A parvenu [PAR-vuh-noo] is someone who has just moved from one of these constructs into another. For 10 points each—  
  
 A. Name these “layers”—often defined by wealth—that make up a stratified society. It is common to divide society into “upper,” “lower,” and “middle” ones of these.  
  
 answer: social classes (accept socioeconomic classes; accept upper class or lower class or middle class)  
  
 B. This is the term for the ability to transition between social classes in society. There exist “downwards” and “upwards” forms of this concept.  
  
 answer: social mobility (accept socially mobile)  
  
 C. This sociologist argued that wealth, prestige, and power define a social class in his essay “Class, Status, Party.” He defined a state as an entity which has a monopoly over violence in Politics as a Vocation.  
  
 answer: Max Weber [VAY-bur] (or Maximilian Karl Emil Weber)  
  
 <RMPSS, SOC SCI>

18. **The prelude of one of this composer's operas consists only of E-flat chords. In one of his operas, the sword Nothung [NOH-tung] is shattered, allowing Hunding to stab the hero. His music is celebrated at the Bayreuth [bye-royt] Festival. In one of his operas, a circle of fire is traversed by (\*)** Siegfried to free Brünnhilde [broon-“HILL”-duh]. For 10 points—name this composer who included “The Ride of the Valkyries” in his opera cycle The Ring of the Nibelungen.  
  
 answer: (Wilhelm) Richard Wagner [REEK-“heart” VAHG-nur]  
  
 <FA, AUDIO>

3. Pencil and paper ready. Consider the periodic function y equals 10 times the cosine [KOH-“sign”] of 2x. For 10 points each—  
  
 A. What is the value of y when x equals zero?  
  
 answer: y = 10 [f(0) = 10 × cos(0) = 10 × 1 = 10]  
  
 B. What is the difference in x-values between any two consecutive roots of the function? You have 10 seconds.  
  
 answer: pi/2 radians or 1/2 pi radians or 0.5 pi radians (do not accept or prompt on “1/2” or “0.5”) [cos(x) has a period of 2 pi, so cos(2x) must have a period of (2 pi)/2 = pi; the zero-to-zero distance is half the period, and thus equals pi/2.]  
  
 C. What is the definite integral of the function over the interval from x equals negative pi to x equals pi?  
  
 answer: 0 (do not accept or prompt on “none” or similar answers) [Since cosine is an even function, its definite integral over any interval -a to a is zero.]  
  
 <SCI, OTHER>

19. **Carnaby Street in this city was the center of a “swinging” cultural movement in the 1960s that inspired the setting of Michelangelo Antonioni's film Blowup. Ken Livingstone was twice mayor of this city; its current mayor is Sadiq Khan. (\*)** Wembley Stadium in this city hosted soccer matches during the 2012 Olympics. For 10 points—name this city whose Palace of Westminster is attached to a clock tower containing ”Big Ben.”  
  
 answer: London  
  
 <GEO, GEO>

5. For 10 points each—answer the following about American parody composer Peter Schickele [SHIK-lee]:  
  
 A. Schickele attributes his parody compositions to a fictitious son of a Baroque composer who had 20 real children. Name either Schickele's pseudonym or the real-life composer.  
  
 answer: P. D. Q. Bach [pseudonym]  
  
 Johann Sebastian Bach (prompt on “Bach”)  
  
 B. Schickele's parody of this Tchaikovsky work incorporates the tune of Pop Goes the Weasel into La Marseillaise and uses popping balloons instead of cannons.  
  
 answer: 1812 Overture or Festival Overture, “The Year 1812,” Op. 49  
  
 C. Schickele's Iphigenia [if-ih-jin-“EYE”-uh] in Brooklyn takes its name from Iphigenia in Tauris, an opera by this 18th-century composer who also wrote Orpheus and Eurydice [yoo-RID-uh-see]  
  
 answer: Christoph Willibald Gluck [glewk]  
  
 <FA, AUDIO>

20. **This author wrote of how humanity is “condemned to Hope's delusive mine” in a poem on the death of his friend Robert Levet. In order to pay for his mother's funeral, this author spent a week writing a novel about a “prince of Abissinia” entitled Rasselas [RASS-uh-luss]. After working for nine years, in 1755 this man published his (\*)** Dictionary of the English Language. For 10 points—name this author whose Life was written by James Boswell.  
  
 answer: Samuel Johnson (accept The Life of Samuel Johnson(, LL.D.) after “Life”)  
  
 <LIT, BRIT>

6. This country has no land connection to its oil-rich exclave of Cabinda. For 10 points each—  
  
 A. Cabinda is a part of what country on the Atlantic coast of Africa?  
  
 answer: (Republic of) Angola (or República de Angola)  
  
 B. Due to its colonial history, Angola is one of the few nations in Africa to speak this European language, which is also spoken in Brazil.  
  
 answer: Portuguese language  
  
 C. Much of eastern Angola is covered by the watershed of this river, the longest and largest African river to flow into the Indian Ocean.  
  
 answer: Zambezi River  
  
 <GEO, GEO>

21. **This state's Fajada [fuh-HAH-dah] Butte contains the Sun Dagger site, which features petroglyphs of solstices and equinoxes. William Becknell blazed a 19th-century trail that was named for this state's eventual capital. Its Chaco Canyon features many pueblos built by the (\*)** Anasazi [an-uh-SAH-zee]. The first atom bomb test, Trinity, was conducted in—for 10 points—what state that contains the Los Alamos National Laboratory, whose capital is Santa Fe [fey]?  
  
 answer: New Mexico  
  
 <GEO, GEO>

0. For 10 points each—answer the following about the physicist Paul Dirac [dih-RAK]:  
  
 A. The Dirac equation incorporates the derivative with respect to time of this function, symbolized by the Greek letter psi [“sigh”].  
  
 answer: wavefunction  
  
 B. Fermi-Dirac statistics are used with fermions, a class of particle defined by having a half-integer value for this quantum property.  
  
 answer: spin (accept spin angular momentum or spin quantum number)  
  
 C. Dirac is the namesake of this function used to represent impulses; it is 0 everywhere except x equals 0, but its integral over any interval containing 0 is 1.  
  
 answer: Dirac delta function  
  
 <SCI, PHYS>

22. **A Salvador Dalí work is titled for a “burning” one of these animals. In 1414 Malindi ambassadors gave one of these animals to Zheng He [zhung huh], who took it back to China. Tanzania's national animal is this ungulate, which Jean-Baptiste Lamarck claimed developed its best-known feature due to repetitive (\*)** reaching for leaves on increasingly tall Acacia [uh-KAY-shuh] trees. For 10 points—name these African herbivores with very long necks.  
  
 answer: giraffes (or Giraffa or Giraffa camelopardalis; accept The Burning Giraffe)  
  
 <MISC., MISC.>

1. Pencil and paper ready. For 10 points each—what is the maximum number of points at which these pairs of figures can intersect?  
  
 A. A rectangle and a hyperbola [“hi”-PUR-buh-luh]  
  
 answer: 4 points  
  
 B. A line and a parabola [puh-RAB-uh-luh]  
  
 answer: 2 points  
  
 C. Two skew lines  
  
 answer: zero points (accept none or do not intersect or similar answers) [By definition, skew lines do not intersect because they are in different planes.]  
  
 <SCI, OTHER>

23. **This is the number of points required to win a game of Android: Netrunner and the number of “Ages” in an empire-building game by the Australian Design Group. It's the number of players in Diplomacy and the die roll that moves the robber in The (\*)** Settlers of Catan. Scrabble players start the game with a rack of—for 10 points—how many tiles, a number that is also the most commonly thrown total on two six-sided dice?  
  
 answer: 7 (accept 7 points or 7 Ages or 7 players or 7 tiles)  
  
 <TRASH, POP CULT>

3. Its chemical formula is O22– [“O two, two minus”]. For 10 points each—  
  
 A. Name this anion that is often used to bleach hair and as a disinfectant.  
  
 answer: peroxide  
  
 B. Peroxides are unstable, as the oxygen-oxygen bond can break easily, forming these substances that have unpaired electrons.  
  
 answer: (free) radicals (accept paramagnetic)  
  
 C. This nine-letter term describes cleavage of a single bond in which each atom receives one of the electrons in the bond.  
  
 answer: homolytic [HOH-moh-LIT-ik] cleavage (accept homolysis)  
  
 <SCI, CHEM>

24. **This architect placed a curved aluminum sculpture above a red brick cylinder in his design for the MIT Chapel. He often used thin concrete shells in his buildings, such as for a hockey arena nicknamed “The Whale,” Yale's Ingalls Rink. This designer of the (\*)** Tulip Chair used an inverted catenary as the basis for a monument to western expansion. For 10 points—name this Finnish-American architect of St. Louis' Gateway Arch.  
  
 answer: Eero Saarinen [“arrow” SAR-uh-nun]  
  
 <FA, OTHER>

2. For 10 points each—answer these questions about mythical twins:  
  
 A. One of these sons of Leda was born immortal and the other was not; a bargain with Zeus [zooss] made them both half-immortal as long as they alternated between Olympus and Hades [HAY-deez].  
  
 answer: Castor and Pollux (or Castor and Polydeuces; accept in either order; accept the Dioscuri; prompt on “Gemini”)  
  
 B. Though they're twin brother and sister, these Egyptian gods of earth and sky are husband and wife. Their children include Nephthys [NEF-thiss] and Osiris [oh-“SIGH”-riss].  
  
 answer: Geb and Nut (accept in either order; prompt on partial answers) [Geb is the god of the earth and Nut is the goddess of the sky.]  
  
 C. In this people's epic Popol Vuh [POH-pul vuh], two ”hero twins” descend into the underworld Xibalba [shee-BAHL-buh] and play a sacred ball game.  
  
 answer: Quiché Maya (accept either underlined portion; accept K'iche')  
  
<RMPSS, MYTH>