2019 Wayzata Academic Invitational Tournament
Written by Ashwin Halepet, Amogh Kulkarni, Brian Lin, Bryanna Shao, Cece Shao, and Ben Weiner
Head edited by Carsten Gehring, with Rob Carson, Geoffrey Chen, Tora Husar, Joe Kammann, and Brian Sachs
Packet 7

## Tossups

1. In the Orphic tradition of Greek myth, this event involves a golden-winged deity named Phanes. In Aztec myth, this event occurred after the humble god Nanahuatzin [nah-nah-watt-zin] jumped into the sun in the Legend of the Fifth Sun. In Norse myth, this event occurs in Ginnungagap, where the cow Audhumla suckles the giant (*) Ymir. Many myth systems involve a "cosmic egg" in this event, and Hesiod's Theogony describes this event in Greek mythology, where gods spontaneously rose from Chaos. For 10 points, name this event that occurred in six days at the beginning of the Book of Genesis. ANSWER: creation of the world [or origin of the world; or start of the world; or cosmogony; or birth of the cosmos; or birth of the world; accept any other equivalents] <AH> Ed. TH
2. Joshua and Esther Lederberg are best known for their experiments with an organism that infects this organism. Labeling this organism's DNA with nitrogen 14 and 15 was used to demonstrate that DNA replication is semiconservative in the Meselson-Stahl experiment. The $\mathrm{O} 157: \mathrm{H} 7$ strain of this organism can cause hemolytic uremic [yu-rem-ik] syndrome. The lambda (*) phage and T4 phages infect this model organism. Diarrhea and other symptoms of food poisoning can result from infection by these organisms. For 10 points, name this gram-negative rod-shaped bacteria that lives in the small intestine. ANSWER: Escherichia coli <BW> Ed. GC
3. A poem in this game begins, "The rising sun will eventually set; a newborn's life will fade." The hero of this game is given advice by the alter ego of Rauru, Kaepora Gaebora, a giant owl. Locations in this game include the bottom of a well and Jabu Jabu's Belly. After leaving the Kokiri Forest, the player learns ( ${ }^{*}$ ) Saria's song, which repeats the notes "down C, right $C$, left $C^{\prime \prime}$ and can be used to gain a heart piece. The player encounters Sheik after removing the Master Sword from a pedestal in, for 10 points, what N64 game in which Ganondorf is defeated by Link with help from the title instrument? ANSWER: The Legend of Zelda: Ocarina of Time [or Densetsu no Zeruda: Toki no Okarina; be generous and prompt on "Zelda" or "The Legend of Zelda" by themselves; prompt on "LoZ: OoT" $^{\prime}$; prompt on "Ocarina" by itself] <BW> Ed. JK
4. This poet describes how a creature "launch'd forth filament, filament, filament, out of itself" in a poem comparing his soul to "a noiseless patient spider." In another poem by this author, the narrator uses "the handkerchief of the Lord" and "the beautiful uncut hair of graves" to describe a type of plant. This poet declares (*) "rise up and hear the bells" and describes the title figure as "fallen cold and dead" in an elegy for Abraham Lincoln. He begins another poem with "I celebrate myself." For 10 points, name this poet who included "O Captain, My Captain" in his collection Leaves of Grass.
ANSWER: Walt(er) Whitman <CS> Ed. JK
5. This leader's offer of textbooks and television programming in a region's native language failed to quell tensions during the Nagorno-Karabakh War. This leader serves his granddaughter pizza in a widely mocked Pizza Hut commercial. The Gang of Eight placed this leader under house arrest during the ( ${ }^{*}$ ) August Coup. This leader's Sinatra Doctrine allowed satellite states to "do it their way," a contrast to the interventionist policies of Leonid Brezhnev. This man enacted the liberal policies of perestroika and glasnost to reform his country. For 10 points, name this last leader of the Soviet Union who had a notable port wine stain on his forehead.
ANSWER: Mikhail Sergeyevich Gorbachev <BL> Ed. TH
6. The designation of a "humanitarian space" in the Puente Nayero neighborhood of this country's main western seaport led to a $90 \%$ drop in the homicide rate in Buenaventura, once this country's most violent city. In this country, feral hippos live around the former residence and current theme park Hacienda Nápoles [ah-see-end-ah NAH-poh-les], which was once owned by (*) Pablo Escobar, the head of a drug cartel based in this country's city of Medellín [med-eh-YEEN]. For 10 points, name this South American country that borders both the Pacific Ocean and the Caribbean Sea and has a capital at Bogotá. ANSWER: Republic of Colombia [or Republica de Colombia] <BL>Ed. BS
7. When commissioning music for a variation in the pas de deux [pah de dew], the choreographer of this ballet wished to replicate "drops of water shooting from a fountain." Another scene in this ballet sees a character throw a slipper at and kill the main antagonist; that character, who is called Marie in George Balanchine's rework of this ballet, receives a gift from the (*) toymaker Drosselmeyer. This ballet based on an E. T. A. Hoffmann story features celesta music in the "Dance of the Sugar Plum Fairy." For 10 points, name this Tchaikovsky ballet about Clara's toy coming to life.
ANSWER: The Nutcracker [or Shchelkunchik] <BS> Ed. TH
8. The idea of the supreme reality is a central part of this religion, which is represented by the $I k$ Onkar symbol. Naam Japo is one of the Three Pillars of this religion, and during the Amrit Sanchar ceremony, new members are inducted into the Order of the (*) Khalsa. The Mul Mantar is repeatedly used in this religion's sacred text, the Adi Granth. To symbolize their willingness to protect the weak, adherents of this religion carry a kirpan, one of its Five Ks. For 10 points, name this monotheistic Indian religion that follows the teachings of the ten gurus.
ANSWER: Sikhism <BL> Ed. JK
9. This man developed the holistic "four field" approach to anthropology. This man was first inspired to become an anthropologist after studying the Inuit on Baffin Island. To oppose the then popular idea of scientific racism, this man proposed the concept of $\mathbf{(}^{*}$ ) cultural relativism. This man observed a gift-giving ceremony called a potlatch among the Kwakiutl [kwah-KOO-tl], which he recorded in The Mind of Primitive Man. This founder of the Columbia anthropology program mentored Ruth Benedict and Margaret Mead. For 10 points, name this father of American anthropology.
ANSWER: Franz Uri Boas <CS> Ed. GC
10. This author wrote about Elwan, who chooses not to marry Randa and kills her future husband Anwar in The Day the Leader Was Killed. In another novel by this author, the magician Arafa breaks into a mansion, killing the title character; that novel by this author takes place in an alley, and its characters are allegorical representations of the $\left.\mathbf{(}^{*}\right)$ Abrahamic religions. Amina is hit by a car and her husband has affairs with women he meets at a grocery store in a novel by this author following the alJawad family. For 10 points, name this author of The Children of Gebelawi and Palace Walk, the first installment in his Cairo Trilogy.
ANSWER: Naguib Mahfouz <BS> Ed. JK
11. The Lennard-Jones model is particularly effective at modeling these elements. The most recently discovered member of this group was first found after a collision between californium and calcium and was named after Yuri Oganessian. A method of writing electron configurations places the chemical symbol of these elements in $\left(^{*}\right.$ ) brackets. A hexafluoroplatinate was the first compound formed with one of these elements, which were traditionally called Group zero due to their unreactive nature. For 10 points, name this group of elements on the far right of the periodic table, including argon and helium.
ANSWER: noble gases [accept Group $\underline{8}$ or Group VIIIA; prompt on "inert gases," "rare gases," or "aerogens"] <BW>
12. The largest one of these events in the US was ended by Wade Hampton and took place along the "German Coast." Another of these events began after its leader saw a blue-green sun, and that leader was eventually discovered to have been hiding in a ditch by Benjamin Phipps. One of these events saw the raid and seizure of $\mathbf{(}^{*}$ ) arms from Hutchinson's Store and was led by "Cato"; that was the Stono Rebellion. Over 50 white people were killed in one of these events led by Nat Turner. For 10 points, name these events, where people forced into labor rebelled against their owners.
ANSWER: slave revolts [accept synonyms for "revolt"; prompt on "revolt" or "rebellion" alone before Stono Rebellion is read] <AK> Ed. TH
13. Gaussian spectral line profiles are the result of this effect's namesake "broadening," which is caused by the thermal motion of gas particles. The effect of time dilation on the "transverse" form of this effect was measured in the Ives-Stilwell experiment. Echocardiograms rely on this phenomenon to measure blood $\left(^{*}\right)$ velocity. The change in frequency as a result of this effect is equal to initial frequency times source velocity over wave velocity. For 10 points, identify this "shift" named after an Austrian physicist that is responsible for the change in pitch as an ambulance siren passes by.
ANSWER: Doppler effect [or Doppler shift; or Doppler broadening; prompt on "redshift" or "blueshift"] <BW> Ed. GC
14. Rudyard Kipling wrote a successor to this poem titled "The Last of" its title characters. The question "Was there a man dismayed?" is posed in this poem. Characters in this poem "flashed all their sabres bare" as cannons fire all around and its characters are "stormed at with shot and shell." This poem asks, "When can their (*) glory fade?" after stating, "Theirs not to reason why, theirs but to do and die." For 10 points, name this Alfred, Lord Tennyson, poem that begins, "Half a league, half a league," and that is about 600 British cavalrymen during the Crimean War.
ANSWER: "The Charge of the Light Brigade" <BW> Ed. JK
15. Ernst Bloch critiqued this painting as "one single mosaic of boredom" and called it the "hellish utopia" of the middle class. A Stephen Sondheim musical follows the artist and his mistress, Dot, as he creates this painting. A black dog sniffs the grass behind a man reclining with a pipe in his mouth in the foreground of this work. A little girl in white stares at the viewer and a woman holding a parasol walks a (*) monkey in the foreground of this painting, which depicts Parisians along the River Seine. For 10 points, name this pointillist painting, a giant work by Georges Seurat.
ANSWER: A Sunday Afternoon on the Island of La Grande Jatte [lah grahnd ZHAHT], 1884 [or Un dimanche après-midi à l'Île de la Grande Jatte, 1884; or A Sunday Afternoon on La Grande Jatte; accept "Isle" in place of "Island"] <CS> Ed. TH
16. In one of these conflicts, Hiero II defeated the Mamertine mercenaries at the Battle of Mylae. After the Battle of Lake Trasimene, the victorious side of these wars employed Fabian strategies. The forces of Varro and Paullus were crushed by an inverted crescent formation at the Battle of Cannae in the second of these conflicts. $\left(^{*}\right.$ ) Cato the Elder called for the third of these wars, which destroyed the losing side. Scipio Africanus ended one of these wars with his victory at the Battle of Zama. Hannibal Barca led one side during the second of, for 10 points, what three conflicts fought between Rome and Carthage?
ANSWER: Punic Wars [accept First Punic War; accept Second Punic War; accept Third Punic War]
<AK> Ed. TH
17. Perthites are intergrowths composed of these minerals, which are common in pegmatites. The continuous branch of Bowen's reaction series comprises a subtype of these minerals. Two examples of these minerals include albite and anorthite. Potassium is found in the (*) orthoclase type of these silicate minerals, and sodium or calcium is found in the plagioclase form. One of these minerals defines a value of 6 on the Mohs hardness scale. For 10 points, name this class of minerals that beats quartz as the most abundant mineral in Earth's crust.
ANSWER: $\underline{\text { feldspars }[\text { accept alkali feldspars, orthoclase feldspars, or plagioclase feldspars] <BW>Ed. }}$ GC
18. In a poem, this poet declares, "I hope to find pity, and forgiveness, for all the modes in which I talk and weep." This poet wrote a set of unfinished biographies that imitate Plutarch's Parallel Lives, titled On Illustrious Men. This poet's Epistolae Familiares includes the letter "The Ascent of Mont Ventoux." This poet wrote, "You who hear the sound, in (*) scattered rhymes," in the 366-poem collection Il Canzoniere. An octave followed by a sestet make up this poet's namesake form of sonnet. For 10 points, name this Italian humanist who wrote sonnets to Laura.
ANSWER: Petrarch [accept Francesco Petrarca] <CS> Ed. JK
19. The Franks Report cleared the winning side of this war of misconduct, which caused James Callaghan to complain of "whitewash." Herbert Jones posthumously received the Victoria Cross after dying during the Battle of Goose Green in this war. The HMS Conqueror controversially sank the (*) General Belgrano during this war, causing half the losing side's total casualties. After the capture of Port Stanley, the leader of the losing side of this war, Leopoldo Galtieri, lost power. For 10 points, name this short 1982 war between Great Britain and Argentina over the namesake South Atlantic islands.
ANSWER: Falklands War [or Malvinas War; accept South Atlantic War before "South Atlantic" is read] <AK> Ed. TH
20. This composer bedeviled scholars by swapping the order of the scherzo and andante movements in the two published editions of his Sixth Symphony. A setting of the final scene of Goethe's Faust forms the second half of a symphony by this composer whose first half is built around the hymn (*) Veni creator spiritus. He removed the third of three "hammer blows of fate" he originally put in his Tragic Symphony and gave no number to his symphonic setting of translated Chinese poems. For 10 points, name this Austrian composer of the Symphony of a Thousand and the Song of the Earth.
ANSWER: Gustav Mahler <CS> Ed. RC
Tiebreaker: One of this author's stories includes a discussion of the actor Chantilly between two characters who met in a Parisian bookstore. In another story, an old man is said to be visiting a friend in the country after his "vulture eye" causes the narrator to kill him and bury him under the (*)
floorboards. Madame L'Espanaye's murder is attributed to an orangutan by the detective C. Auguste Dupin in a story by this author. A poem by this author begins "once upon a midnight dreary" and repeats "nevermore." For 10 points, name this author of "The Murders in the Rue Morgue" and "The Raven."
ANSWER: Edgar Allen Poe <BS> Ed. JK

## Bonuses

1. The Tsiolkovsky rocket equation is an extension of this law for systems with nonconstant mass. For 10 points each:
[10] Name this law that states that force equals mass times acceleration.
ANSWER: Newton's second law of motion
[10] Newton's second law can be used to calculate the acceleration of one of these machines, which consist of two massive objects connected through an ideal pulley.
ANSWER: Atwood machine
[10] For an Atwood machine connecting masses of $m$ and $2 m$, the acceleration is this number times little g.

ANSWER: one-third <BW> Ed. GC
2. Answer some questions about Islamic doctrine, for 10 points each.
[10] To convert to Islam, one must recite this declaration that there is no god but Allah and that
Muhammad is his messenger.
ANSWER: Ash-Shahada
[10] The Shahada is one of these obligations in Islam, which include fasting during Ramadan, praying, and charitable giving.
ANSWER: Five Pillars of Islam
[10] This pillar of Islam involves the stoning of the devil and walking around the Kaaba seven times.
Able-bodied Muslims must carry out this pilgrimage at least once in their lives.
ANSWER: haji <AH> Ed. JK
3. In this novel, deaths are often followed with the phrase "so it goes." For 10 points each:
[10] Name this semi-autobiographical novel that is written in non-chronological order. The protagonist of this novel survives the firebombing of Dresden and meets aliens shaped like toilet plungers on the planet Tralfamadore.
ANSWER: Slaughterhouse-Five, or The Children's Crusade: A Duty-Dance with Death
[10] In Slaughterhouse-Five, Eliot Rosewater introduces Billy Pilgrim to the fictional sci-fi author Kilgore Trout, who, along with the Pontiac dealer Dwayne Hoover, is one of the protagonists of this other novel by the same author of Slaughterhouse-Five.
ANSWER: Breakfast of Champions, or Goodbye Blue Monday
[10] Kilgore Trout is the alter ego of this man, the author of Slaughterhouse-Five and Breakfast of Champions. ANSWER: Kurt Vonnegut <BS> Ed. JK
4. This man ordered the burning of Michael Servetus, a man he regarded as a heretic. For 10 points each: [10] Name this Protestant reformer who wrote the Institutes of the Christian Religion.
ANSWER: John Calvin [accept Jehan Cauvin]
[10] John Calvin preached his namesake doctrine in this city, which was an independent canton at the time. This city lies on a namesake lake on the border between Switzerland and France.
ANSWER: Geneva [accept Genève; accept Genf]
[10] This other leader of the Swiss Reformation led Zürich during the Kappel Wars. Philip of Hessen invited this man and Martin Luther to debate the Eucharist at the Marburg Colloquy.
ANSWER: Huldrych Zwingli <BL> Ed. TH
5. Lady Gaga was photographed in four outfits when entering this museum for its annual fundraising gala. For 10 points each:
[10] Name this New York City museum that in 2019 held a gala with the theme "Camp: Notes on Fashion."
ANSWER: The Metropolitan Museum of Art [accept Met Gala]
[10] This fashion journalist and chairwoman of the Met Gala wore her signature blonde bob along with a pink feathered dress designed by Karl Lagerfeld before Lagerfeld's February 2019 death.

## ANSWER: Anna Wintour

[10] Anna Wintour is the editor in chief for this magazine. Beyoncé's cover by Tyler Mitchell was the first in this magazine's history to be shot by an African American photographer, and Meghan Markle guestedited the September 2019 issue for this magazine in Britain.
ANSWER: Vogue Magazine <BS> Ed. BS
6. In 2005, this woman gave young actresses the advice, "If Harvey Weinstein invites you to a private party in the Four Seasons, don't go." For 10 points each:
[10] Name this musician and actress who starred in The People vs. Larry Flynt and released the album Live Through This with the band she founded. This woman is also the mother of Frances Bean Cobain.
ANSWER: Courtney Love [accept Courtney (Michelle) Harrison]
[10] Love is the frontwoman and founder of this alternative rock band that released the albums Celebrity Skin and Pretty on the Inside to critical acclaim.
ANSWER: Hole
[10] Love's husband, Kurt Cobain, was the frontman and lead singer for this grunge group behind the albums In Utero and Nevermind, with hits including "Smells like Teen Spirit" and "Heart-Shaped Box." ANSWER: Nirvana <BW> Ed. JK
7. Diploid organisms with an odd number of these structures are typically sterile. For 10 points each:
[10] Name these structures composed of densely packed DNA and proteins. Human cells usually have 46 of these entities, and the $X$ and $Y$ ones determine sex.
ANSWER: chromosomes [accept $X$ chromosome or $Y$ chromosome; do not accept or prompt on "chromatin" or "chromatids"]
[10] Chromosomes can be classified as acrocentric, metacentric, or holocentric based on the position of this structure, which is where sister chromatids are attached to each other.
ANSWER: centromeres [do not accept or prompt on "centrosomes" or "centrioles"]
[10] An epigenetic marker of centromeres is one of these proteins called CENPA [C-E-N-P-A]. Chromatin winds around these bead-like proteins to form nucleosomes.
ANSWER: histones < BW> Ed. GC
8. Ford Madox Ford's novel about this type of person follows John Dowell and begins, "This is the saddest story I have ever heard." For 10 points each:
[10] The narrator of Rupert Brooke's poem titled for this profession asks the reader to remember "that there's some corner of a foreign field that is for ever England."
ANSWER: soldier [accept "The Soldier" or "Nineteen-Fourteen: The Soldier"; accept The Good Soldier] [10] Rupert Brooke died in this war. Siegfried Sassoon's poem "Counter-Attack," which describes "green clumsy legs, high-booted, sprawled, and grovelled along the sap," is set during this war.
ANSWER: World War I [accept the Great War or the War to End All Wars or any other commonly accepted names for WWI]
[10] Sassoon was friends with this poet who described an "ecstasy of fumbling" in the poem "Dulce et Decorum Est." He asked, "What passing-bells for these who die as cattle?" in "Anthem for Doomed Youth."
ANSWER: Wilfred Owen <CS> Ed. JK
9. This group removed city dwellers, known as "new people," from urban areas to work in the fields with peasant "old people." For 10 points each:
[10] Name this communist regime that ruled Cambodia from 1975 to 1979. This regime established a notorious torture chamber at Tuol Sleng, a former high school.
ANSWER: Khmer Rouge [or Communist Party of Cambodia; or Democratic Kampuchea; or Khmae

## Kro-hom]

[10] This man led the Khmer Rouge for the entirety of its existence.
ANSWER: Pol Pot [or Saloth Sar]
[10] The Khmer Rouge persecuted this ethnic group, 17 members of which were slaughtered in the Chau Doc massacre. After troops of this ethnic group captured Phnom Penh [puh-NUM peng], the People's Republic of Kampuchea was founded.
ANSWER: Vietnamese [or Kinh] <BL> Ed. TH
10. This technique commonly relies on indicators such as phenolphthalein. For 10 points each:
[10] Name this laboratory technique that is used to determine the concentration of an analyte. It commonly uses a burette.
ANSWER: acid-base titration
[10] This is the point where an indicator used in titration changes color. It occurs after the equivalence point.
ANSWER: end point
[10] A titration curve will have multiple equivalence points if the acid used in the titration has a property referred to by this term. This term refers to the ability of an acid to donate more than one proton.
ANSWER: polyprotism [or polyprotic acids; accept diprotic acids or diprotism; accept triprotic acids or
triprotism] <BW> Ed. GC
11. In a novel by this author, a harelipped gardener quits his job to bring his mother's ashes to her birth land. For 10 points each:
[10] Name this author of Life and Times of Michael K. In this author's novel Disgrace, David Lurie loses his professorship after seducing his student Melanie Isaacs.
ANSWER: John Maxwell Coetzee [keht-see]
[10] In Coetzee's novel Foe, Susan Barton meets this literary character when looking for her kidnapped daughter. Susan becomes the "second subject" to this man, who dies on the way back to England.
ANSWER: Robinson Crusoe [accept Cruso]
[10] J. M. Coetzee was born in this country. Authors Alan Paton and Nadine Gordimer are also from this country, where they set novels in Johannesburg.
ANSWER: Republic of South Africa <CS> Ed. JK
12. This suite includes a depiction of a chase scene involving Baba Yaga in its movement "The Hut on Fowl's Legs." For 10 points each:
[10] Name this piano suite that also includes the movements "Tuileries" [TWEE-leh-ree] and "The Great Gate of Kiev." It was inspired by a display of watercolors and drawings by Viktor Hartmann.
ANSWER: Pictures at An Exhibition [or Kartínki s výstavki; accept Pictures from an Exhibition]
[10] Pictures at an Exhibition is by this Russian composer of Night on Bald Mountain, who was a member of the Mighty Five.
ANSWER: Modest (Petrovich) Mussorgsky
[10] Pictures at an Exhibition features five of these interludes, which alternate between 5/4 ["five four"], 6/4 ["six four"], and sometimes $7 / 4$ ["seven four"] time and represent Mussorgsky walking between displays. ANSWER: promenades <BS> Ed. RC
13. In this type of jail, prisoners are placed in a circular building with a guard tower in the middle. For 10 points each:
[10] Name this type of jail in which the guards can see the prisoners but the prisoners are unable to see the guards. Thus, in this type of jail, guards hold complete power and prisoners never know when they are under surveillance.
ANSWER: Panopticon
[10] This philosopher proposed the Panopticon and wrote Principles of Morals and Legislation. He also founded the school of utilitarianism.
ANSWER: Jeremy Bentham
[10] An alternative formulation of utilitarianism, negative utilitarianism, aims to minimize the amount of this sensation by minimizing suffering instead of maximizing happiness.
ANSWER: pain <CS> Ed. GC
14. This event led to the founding of Princeton University in 1746 as a school for ministers. For 10 points each:
[10] Name this revival of Christian piety during the 1730 s and 1740 s in the British colonies. Another such revival arose in the US in the nineteenth century.
ANSWER: First Great Awakening [or Evangelical Revival; prompt on "Great Awakening"; do not accept or prompt on "Second Great Awakening"]
[10] George Whitefield, an early leader of this denomination, delivered sermons during the First Great Awakening that were so popular that he often had to preach outdoors. This denomination, whose primary founder was John Wesley, emphasizes the doctrine of "perfect love."
ANSWER: Methodism [or Methodists]
[10] During the First Great Awakening, Jonathan Edwards delivered this alarmist sermon that describes man as a spider hanging over the fiery pit of hell.
ANSWER: "Sinners in the Hands of an Angry God" <BW> Ed. TH
15. This character studies at the Waldzell in Castalia. For 10 points each:
[10] Name this protagonist who becomes the Magister Ludi in a novel before leaving to tutor Designori's son. On a "mission" to Mariafels, this man meets Father Jacobus.
ANSWER: Joseph Knecht [accept either underlined answer]
[10] Joseph Knecht appears in The Glass Bead Game, whose author also wrote this novel in which Harry Haller meets the saxophonist Pablo and kills Hermine in the Magic Theater.

## ANSWER: Steppenwolf

[10] This German author of The Glass Bead Game and Steppenwolf wrote about the title character's journey to enlightenment in Siddhartha.
ANSWER: Hermann Hesse <BS> Ed. JK
16. The cumulative density function of this distribution is defined in terms of the error function. For 10 points each:
[10] Name this symmetric, unimodal distribution. Random variables distributed in accordance to this distribution obey the 68-95-99.7 rule.
ANSWER: normal distribution [or Gaussian distribution; prompt on "bell curve"]
[10] The 68-95-99.7 rule is used to remember the proportion of values that lie within a band around the mean with a width defined by this quantity of the normal distribution. This quantity, symbolized sigma, is the square root of variance.
ANSWER: standard deviation
[10] In a normal distribution, this "score" can be calculated for a data point by subtracting the data points from the mean and dividing by the standard deviation.
ANSWER: $\underline{z}$-score [or standard score] <AK> Ed. GC
17. Protestors advocating for equal parliamentary representation were massacred in St. Peter's Field near this city. For 10 points each:
[10] Name this English city in which the Peterloo Massacre occurred. This city earlier experienced a massive boom due to the textile industry making it the first industrialized city, earning it the nickname "Cottonopolis."
ANSWER: Manchester
[10] Injustices regarding parliamentary representation were eventually corrected with the passage of this 1832 act. It eliminated rotten boroughs.
ANSWER: Reform Act of 1832 [accept Great Reform Act, First Reform Act, or Representation of the People Act of 1832]
[10] The Reform Act of 1832 was passed under this prime minister. This prime minister also abolished slavery in the British Empire.
ANSWER: Charles Grey, 2nd Earl Grey [accept Viscount Howick] <BW> Ed. TH
18. This deity's most important shrine was Mount Kyllene in Arkadia, where this deity was reputedly born. For 10 points each:
[10] Name this winged messenger of the gods in Greek mythology.
ANSWER: Hermes [do not accept or prompt on "Mercury"]
[10] Hermes wielded this staff, also known as the herald's wand. The original ribbons on this staff were later replaced with two intertwined snakes.
ANSWER: caduceus [or kerykeion]
[10] Hermes frequently performed this role of leading dead souls to the underworld. In Aztec myth, Xolotl served this role in Mictlan.
ANSWER: psychopompós <AK> Ed. TH
19. A work in this medium, Echoes of Harlem, shows 30 different faces arranged at various angles. For 10 points each:
[10] Name this medium used by Faith Ringgold for her work Who's Afraid of Aunt Jemima? and the series The French Collection.
ANSWER: story quilts [accept word forms like quilting]
[10] Faith Ringgold is from this country, also the home of artists Jacob Lawrence and Amy Sherald.
Ringgold's Echoes of Harlem depicts residents of a neighborhood in New York City, a city in this country. ANSWER: United States of America [accept America]
[10] Amy Sherald is most famous for her portrait of this person, who is depicted wearing a white dress with geometric designs. A picture of two-year-old Parker Curry looking in awe at that portrait of this woman went viral in 2018.
ANSWER: Michelle Obama [or Michelle LaVaughn Robinson; prompt on "Obama"] <CS> Ed. TH
20. This man designed the public pavilion in Banff National Park in Alberta. For 10 points each:
[10] Name this architect of Fallingwater and the Guggenheim Museum in New York. His Imperial Hotel in Tokyo famously survived the Great Kantō earthquake in 1923.
ANSWER: Frank Lloyd Wright
[10] Wright was a pioneer of this school of architecture prevalent in the Midwest, which is characterized by horizontal lines and flat or hipped roofs.
ANSWER: Prairie School
[10] One of the best examples of Prairie School architecture is this Wright building on the campus of the University of Chicago that was created for its namesake businessman. It contains 174 art-glass panels.
ANSWER: Frederick C. Robie House <BW> Ed. JK

