

Round 1

Lilly Chavez • Brad Fischer • James Fischer • Mike Laudermith • Jessica Markley
Sophie Netzel • Cooper Roh • Kristin Strey • Ethan Strombeck • Lana Kay Tutterow
Tyler Vaughan • Justin Zhang

Tossups

(1) **The surface form of this quantity is measured with a pyrometer. The first reliable tool for measuring this quantity was a sealed glass tube of (*) mercury.** Absolute scales for this quantity include Rankine and Kelvin, and its standard scale is based on the freezing and boiling points of water. For ten points, name this quantity recorded in degrees Celsius.

ANSWER: temperature

(2) **Six men in this poem die when their ship passes between Scylla and Charybdis. The hero of this poem tricks Polyphemus, a (*) cyclops, and kills a band of suitors with his son, Telemachus, to reunite with his wife, Penelope.** For ten points, name this ancient epic poem by Homer in which the title Greek hero returns home to Ithaca.

ANSWER: The Odyssey (accept Odysseia)

(3) **In 1934, the controversial construction of the Parker Dam on this river required the National Guard to muster the Arizona Navy. Dams on this river form the Glen Canyon Dam and Lake (*) Mead,** which is formed by the Hoover Dam. For ten points, name this river of the American West that flows through the Grand Canyon and starts in the Rocky Mountains of its namesake state.

ANSWER: Colorado River

(4) **A religious figure often depicted performing this action in padma-sana, named Gautama, achieved enlightenment by performing this action under the (*) Bodhi tree.** Some modern forms of this practice use mantras, repeated patterns of speech or thought, to promote sati, or “mindfulness.” For ten points, name this common practice in Buddhism and Hinduism, the act of engaging in deep reflection.

ANSWER: meditation (accept word forms like meditating; prompt on “yoga”)

(5) **Justice Ward Hunt decided this woman’s guilt before her trial began and told the jury to declare her guilty. In post-trial remarks, this woman argued that she had the “right to a voice” in government and threatened that she would never (*) pay a one hundred dollar fine that was levied in June 1873.** For ten points, name this American suffragist who was convicted of illegally voting, and who is honored on a one-dollar coin.

ANSWER: Susan B. Anthony

(6) **This character stars in a 2010 game in which he must repair a world created by Yen Sid with a magic paintbrush. In *Kingdom Hearts II*, this character meets Sora in a world based on the 1928 film (*) *Steamboat Willie*.** Hundreds of silhouettes of this character's head can be found scattered around a massive amusement park near Orlando, Florida. For ten points, name this rodent mascot created by Walt Disney.

ANSWER: Mickey Mouse (accept King Mickey; do not accept "Steamboat Willie")

(7) **This author's translation of the Red Book of Westmarch changes the names Kalimac and Banazîr into Meriadoc and Samwise. In one of this author's novels, the Rohirrim join in a battle against thousands of (*) orcs.** In another novel by this man, Bilbo Baggins is sent on a journey with thirteen dwarves by the wizard Gandalf. For ten points, name this linguist and author of *The Hobbit* and *The Lord of the Rings*.

ANSWER: J.R.R. Tolkein (accept John Ronald Reuel Tolkein)

(8) **This composer wrote an *Italian Capriccio* and died just days after the premiere of his sixth and final symphony, the *Pathétique*. Another piece by this composer uses melodies from "La Marseillaise" [mar-sah-YEZ] and "God Save the (*) Tsar"** to depict a failed invasion, and was premiered outdoors to include an unusual instrument. For ten points, name this Russian composer who used church bells and cannons in his *1812 Overture*.

ANSWER: Pyotr Ilyich Tchaikovsky

(9) **In July 1994, scientists studying this object made the first observance of an extraterrestrial collision when fragments of the Shoemaker-Levy 9 comet crashed into this (*) planet.** This planet's gravitational pull creates the Kirkwood gaps, which are empty regions within the nearby asteroid belt. The Great Red Spot is found on, for ten points, what gas giant, the largest planet in our solar system?

ANSWER: Jupiter

(10) **This country's throne was contested in the War of the Three Henrys. Catherine de' Medici incited the 1572 St Bartholomew's Day Massacre in this country. The Edict of (*) Nantes [nahnt] gave religious protection to this country's Protestant Huguenots.** For ten points, name this country where Henry IV justified converting to Catholicism by saying, "Paris is worth a mass."

ANSWER: Kingdom of France

(11) **Foods rich in this substance are called antiscorbutics [anti-skor-byoo-tiks]. Nobel laureate Linus Pauling advocated taking mega-doses of this compound to (*) prevent the common cold.** This compound is needed by the body to build collagen, so its deficiency will result in scurvy. For ten points, name this vitamin concentrated in citrus fruits like limes and oranges.

ANSWER: vitamin C (accept ascorbic acid; accept C alone after "vitamin" is read)

(12) **Three windows in this work's background align with a real-life doorway in the Santa Maria delle Grazie that cuts off the feet of this painting's central figure. A man in this work knocks over a (*) salt cellar and clutches a bag of silver while the men around him argue about the revelation that their leader will be betrayed.** For ten points, name this painting by Leonardo da Vinci that shows Jesus's final meal with his disciples.

ANSWER: The Last Supper (accept Il Cenacolo; accept L' Ultima Cena)

(13) **In the Collatz conjecture, this type of number is tripled, then has one added to it. Polynomials with this type of degree always have a real root. Adding two of these numbers together always gives you a number (*) without this property. All prime numbers except two are, for ten points, what type of number that has remainder 1 when divided by two and is thus contrasted with even?**

ANSWER: odd numbers

(14) **The Blue and Green demes [deems] were fans of this sport who clashed in the Nika Riots, which began in the Hippodrome of Constantinople. Gaius Appuleius Diocles [gah-yuss ah-poo-lee-us dye-oh-kleez] became the wealthiest athlete in history by operating a (*) quadriga in this sport. Ancient Olympic prizes for this sport were given to the owner, not the driver. Rome's Circus Maximus held competitions of, for ten points, what sporting event involving horse-drawn vehicles?**

ANSWER: chariot racing (accept word forms like chariot races; prompt on partial answers like “chariot riding”)

(15) **An early version of this story concerns the Greek slave girl Rhodopis. In the Grimm Brothers version of this story, Aschenputtel's sisters cut off their (*) toes to trick a prince. Charles Perrault may have mistranslated a word meaning “fur” as “glass” when describing a pair of slippers in this story. For ten points, name this fairy tale in which a servant girl's fairy godmother helps her go to a ball and marry a prince.**

ANSWER: Cinderella (accept Aschenputtel; accept Cendrillon ou la petite pantoufle de verre)

(16) **In 2002, this country was the site of the Godhra train burning, which led to deadly religious riots in Gujarat that may have been promoted by this country's current Prime Minister. The BJP party holds a majority in this country's lower house of Parliament, the (*) Lok Sabha, despite its controversial ties to the nationalistic Hindutva movement. Narendra Modi leads, for ten points, what country whose Parliament meets in New Delhi?**

ANSWER: Republic of India

(17) **In the *Iliad*, this figure goes to her mother Dione after being wounded by Diomedes. This goddess gave Hippomenes [hih-PAH-meh-neeZ] golden apples to woo Atalanta. This mother of (*) Phobos and Deimos sparked the Trojan War when she promised Helen to Paris, and she was captured in a net with Ares by her husband Hephaestus. For ten points, name this Greek goddess of love and beauty.**

ANSWER: Aphrodite (do not accept or prompt on “Venus”)

(18) **This natural phenomenon can be graphed by sinusoidal [syeh-nuh-soy-dull] functions. This phenomenon's standing type has minimal displacement at its nodes. Compton scattering demonstrates that light behaves like a (*) particle, and not just as this phenomenon. For ten points, name this physical phenomenon that can carry energy without transferring mass, as seen on the moving surface of the ocean.**

ANSWER: waves (accept additional information, such as standing waves)

(19) **A brother and sister in this novel reunite with Sandy and Dennys after returning from Camazotz with Calvin O'Keefe. In this novel, Mrs (*)** Who quotes First Corinthians to the protagonist to tell her to use her love for her brother to save Charles Wallace from IT. For ten points, name this novel by Madeleine L'Engle in which Meg Murry uses a tesseract to save her father while traveling through the multiverse.

ANSWER: A Wrinkle in Time

(20) **This agreement was negotiated by ambassadors James Monroe and Robert Livingston, who included a fifteen million dollar payment that was to be used to (*)** invade England. After this agreement, Thomas Jefferson launched the Lewis and Clark Expedition. For ten points, name this agreement that nearly doubled the size of the United States by buying, among other territory, New Orleans.

ANSWER: Louisiana Purchase (accept descriptive answers relating to France selling Louisiana to the US)

Bonuses

(1) The angst between political parties is not a new development in American politics. For ten points each, Name this man who argued against the establishment of political parties in his 1796 Farewell Address, which he wrote as he retired to Mount Vernon after serving two terms as President.

ANSWER: George Washington

While campaigning for the progressive Bull Moose party in 1912, this former US president lamented that American political parties have “become the tools of corrupt interests.”

ANSWER: Theodore Roosevelt (accept Teddy Roosevelt; prompt on “Roosevelt”)

Joshua Norton, a resident of this western city, proclaimed himself Emperor of the United States and, in 1869, issued a decree banning the Democratic and Republican parties. Norton also issued a decree ordering a suspension bridge be built to connect this city and Oakland, which eventually did happen.

ANSWER: San Francisco

(2) Berthe Morisot [bayr-tuh moh-ree-soh] was one of the “grand dames” of a group that a contemporary art critic called “five or six lunatics,” who became known as the Impressionists. For ten points each,

The “grand dames” of Impressionism are Morisot, Marie Bracquemond [mah-ree brah-kah-mawnd], and this American woman who painted *The Boating Party*.

ANSWER: Mary Cassatt (accept Mary Stevenson Cassatt)

Morisot and Cassatt frequently painted these people. Morisot painted these people with older relatives in *On the Balcony* and *The Cradle*, and Cassatt painted one of these people having a foot washed by a woman in a blue striped dress.

ANSWER: children (accept toddlers; accept baby or babies; accept specific answers like little girls or little boys; accept The Child’s Bath)

Though many of the Impressionists preferred to work with large dabs of oil paint, Morisot was a master of this method of painting, which uses paint or ink in a namesake wet suspension. This painting method is common in elementary school art classes.

ANSWER: watercolor (accept aquarelle)

(3) Brownian motion was first described as the motion of this substance in a drop of water. For ten points each, Name this powdery substance that may be carried by insects or the wind from plant to plant, a vital step in plant reproduction.

ANSWER: **pollen**

Pollination begins when pollen produced in this male reproductive organ reaches the stigma. This organ is comprised of the anther and filament.

ANSWER: **stamen**

Flowers use these brightly colored, modified leaves to attract pollinators.

ANSWER: **petals** (prompt on “corolla”)

(4) In this novel, Emily Shelby is unable to stop her husband from selling the title man; later, Marie St Clare prevents the title man from gaining his freedom by selling him to Simon Legree. For ten points each,

Name this novel that follows the life of the title American slave, who is killed on Simon Legree’s orders. Harriet Beecher Stowe subtitled this novel *Life Among the Lowly*.

ANSWER: **Uncle Tom’s Cabin**, or Life Among the Lowly

Marie St Clare’s sister-in-law, Ophelia, is a northern woman who claims to support this political cause, even though she reacts negatively to the novel’s black characters. Stowe hoped her novel would inspire her readers to see slaves as humans and support this cause.

ANSWER: **abolitionism** (accept word forms like **abolitionism** or **abolishing slavery**)

In *Uncle Tom’s Cabin*, this woman runs away from the Shelby family when she overhears that they plan to sell her son, Harry, along with Tom. With Harry and her husband, George, this woman escapes to freedom in Canada, where she reunites with her mother, Cassy.

ANSWER: **Eliza** Harris

(5) Give the following about math class supplies that predate the graphing calculator, for ten points each.

Classical mathematicians commonly studied geometry problems with just a straight-edge and this drawing device, which guides a pencil to draw circular arcs.

ANSWER: **compass**

This device, which is usually produced as a transparent plastic half-circle, measures angles and is commonly used with the compass in geometry class.

ANSWER: **protractor**

Engineers may be familiar with the set square, which provides straight-edges at a right angle to each other. Its interior is a traceable outline that, commonly, gives this acute angle, whose sine is equal to half of the square root of two.

ANSWER: **forty-five** (45) degrees (accept equivalents like **pi over four** radians or one-**fourth pi** radians or one-**quarter pi** radians)

(6) At Ragnarök, this god will kill and be killed by Garm, the guard dog of Hel. For ten points each,

Name this one-handed Norse god of war.

ANSWER: **Tyr**

Tyr lost his hand trying to bind this creature, who bit his hand off. At Ragnarök, this enormous wolf will swallow Odin whole.

ANSWER: **Fenrir** (accept the **Fenris** Wolf)

In the Prose Edda, this god of mischief is described as the father of Fenrir, the Midgard Serpent Jörmungandr [YOHR-mun-gon-dur], and Hel herself.

ANSWER: **Loki**

(7) This empire's control of Britannia was shaky at best in the first and second centuries CE. For ten points each,

Name this ancient European empire which built Hadrian's Wall in what is now northern England. Boudica led an uprising against this empire in 60 CE that forced one of its generals, Gaius Suetonius Paulinus, to abandon an entire city.

ANSWER: **Rome** (accept **Roman** Empire)

Suetonius abandoned this city, the major trade hub of Britannia, in order to regroup his forces. Boudica's troops burned this city to the ground, and archaeologists have found burned Roman debris at sites along the Thames [tems] River here.

ANSWER: **London** (accept **Londonium**)

The initial success of Boudica's uprising almost convinced this emperor to withdraw the Romans from Britannia entirely. This son of Agrippina and last emperor from the Julio-Claudian dynasty was criticized for supposedly playing music while Rome burned in 64 CE.

ANSWER: **Nero** Claudius Caesar Augustus Germanicus

(8) In the music video for this song, the singer is dressed as an order of french fries and hugs a woman dressed as a hamburger, symbolically ending a five-year-long feud. For ten points each,

Name this song, the second single off an album that put all eighteen of its tracks on the Billboard Hot 100 when it debuted in August 2019. This song's lyrics ask "Like, can you just not step on my gown?"

ANSWER: **You Need to Calm Down**

This singer of hits like "Delicate" and "Shake It Off" released the album *Lover*, including "You Need to Calm Down," in 2019.

ANSWER: Taylor **Swift** (accept Taylor Alison **Swift**)

Swift, wearing the french fries costume, hugs this pop star at the end of the "You Need To Calm Down" video. Many critics speculated that Swift's song "Bad Blood" was about this singer.

ANSWER: Katy **Perry** (accept Katherine "Katy" **Hudson**)

(9) This novel's protagonist takes Sancho Panza with him on a journey to do glorious deeds in the name of his lady-love. For ten points each,

Name this Spanish novel by Miguel de Cervantes, in which the title man rides out on his tired old horse, Rocinante, and imagines he is battling giants.

ANSWER: Don Quixote (accept El ingenioso hidalgo Don Quixote de la Mancha; accept The Ingenious Gentleman Don Quijote of La Mancha)

When Don Quixote [kee-HOH-tay] is convinced he and Sancho Panza are battling giants, he is really attacking the sails of these small buildings, used to grind grain into flour.

ANSWER: windmills (prompt on "mill")

Don Quixote gives this name to Aldonza Lorenzo, the woman he believes is his noble-born love, but who is really a farm girl who doesn't know that she is the focus of Quixote's madness.

ANSWER: Dulcinea del Toboso

(10) These devices contain a cathode and anode immersed in electrolytes and are used to convert chemical energy into electrical energy. For ten points each,

Name these devices. The 2019 Nobel Prize in Chemistry was awarded to three scientists who developed a rechargeable lithium-based type of this device.

ANSWER: battery (accept electrochemical cells; accept lithium-ion battery; prompt on "cell")

This Italian physicist created the first battery by stacking alternating zinc and silver disks separated by soaked cloths. The SI unit of electric potential was named in honor of this man.

ANSWER: Alessandro Volta (accept Alessandro Giuseppe Antonio Anastasio Volta; prompt on "volt")

The term "battery" was coined by this American inventor who theorized an early battery as a collection of Leyden jars. This man's other thought experiments involving electricity include a rather dangerous one involving a key and a kite.

ANSWER: Benjamin Franklin

(11) This holiday is celebrated over three days, beginning with the sighting of the new moon on the first of Shawwal. For ten points each,

Name this Islamic holiday that marks the end of a month of fasting with lavish celebrations and feasting.

ANSWER: Eid al-Fitr [EED al-fih-ter] (accept Eid ul-Fitr or Festival of Breaking the Fast; prompt on "Eid;" prompt on, but do not otherwise reveal, "the end of Ramadan;" do not accept or prompt on "Ramadan" alone; do not accept "Eid al-Adha")

Eid Al-Fitr comes immediately after this ninth month of the Islamic calendar, characterized by prayer and fasting from sunrise until sunset.

ANSWER: Ramadan (accept Ramazán, Ramzan, or Ramadhan)

During Ramadan, Muslims are encouraged to read the entirety of this book, the central religious text of Islam.

ANSWER: Quran

(12) A key part of this speech called for German troops to leave Belgium and allow it to be its own country. For ten points each,

Name this 1918 presidential speech that outlined, and is named for, a proposed peace solution for Europe and the United States after World War I.

ANSWER: **Fourteen Points**

The Fourteen Points speech was given by this twenty-eighth US president. After this president suffered a stroke in his second term, his wife Edith took over many of his responsibilities.

ANSWER: Woodrow **Wilson** (accept Thomas Woodrow **Wilson**)

The last and most important of Wilson's Fourteen Points was the creation of this peacekeeping world organization, which sought to protect all countries. The US never joined this organization, which failed to prevent World War II and dissolved shortly after.

ANSWER: **League of Nations**

(13) These institutions may be subject to a "reserve requirement," limiting the amount of their deposits that can be used in their lending business. For ten points each,

Name this type of institution that generally profits on the difference in interest rates between the loans it provides and the savings deposits it holds.

ANSWER: commercial **banks**

Most commercial banks in the United States are members of this central banking system and must hold their deposits at one of its twelve regional banks across the country. Jerome Powell is the current Chair of this system.

ANSWER: **Federal Reserve System**

The reserve requirement is also known as the ratio of this concept, a measurement of how easily an asset can be sold without losing value. Stores that are going out of business may have sales named for this concept, since they are trying to convert their remaining inventory into cash.

ANSWER: **liquidity** (ratio) (accept word forms like **liquidation** sale)

(14) The WC-130 is a Lockheed airplane modified for collecting data from these events. For ten points each, Name these meteorological events which are “hunted” by WC-130 pilots, who fly in and out of their eyewall while collecting pressure and wind speed data.

ANSWER: hurricanes (accept typhoon; accept tropical cyclone; accept tropical storm; accept tropical depression; prompt on “(thunder)storm”)

This US governmental agency, which operates the National Weather Service and National Ocean Service, employs a team of hurricane hunters to gather data for forecasting. In 2019, officials in this agency were threatened if they didn’t support Donald Trump’s mistaken claim that Hurricane Dorian would hit Alabama.

ANSWER: National Oceanic and Atmospheric Administration (accept NOAA [“noah”])

Hurricanes are classified on the Saffir-Simpson scale, which uses this classification for the most severe storms. A hurricane must have sustained winds of at least one hundred fifty-seven miles per hour to reach this status.

ANSWER: Category Five

(15) Svalbard, an archipelago of this country, is one of the northernmost inhabited places in the world. For ten points each,

Name this European country known for its numerous fjords [f’yords]. Its capital is Oslo.

ANSWER: Kingdom of Norway (accept Norge; accept Kongeriket Noreg)

Norway is a part of this geographic and ethnic region, along with Sweden and Denmark. It shares its name with the peninsula containing Norway and Sweden.

ANSWER: Scandinavia (accept Scandinavian Peninsula)

Oslo sits on a fjord that empties into the Skaggerak, a strait connecting the Baltic Sea to this sea east of Britain.

ANSWER: North Sea

(16) This bonus takes us to fair Verona. Answer some questions about a Shakespeare play about the conflict between the houses of Capulet and Montague, for ten points each.

In the play, this young man from the house of Montague falls in love with the thirteen-year-old daughter of the opposing house of Capulet, Juliet.

ANSWER: Romeo Montague

This man is neither a Capulet nor a Montague, but is Romeo’s friend. This man delivers the Queen Mab speech and is stabbed by Juliet’s cousin Tybalt in a duel.

ANSWER: Mercutio

Juliet and Romeo are married in secret by this man, who hopes the marriage will reconcile their houses. This man suggests that Juliet fake her death to avoid marrying Count Paris.

ANSWER: Friar Laurence (prompt on “Friar”)

(17) This city's northern entrance was through the blue Ishtar Gate, built during its revival under Nebuchadnezzar. For ten points each,

Name this ancient city that served as capital for Hammurabi and Nebuchadnezzar in two different empires named for it.

ANSWER: **Babylon**

Nebuchadnezzar ordered the creation of this Babylonian structure, the only one of the seven ancient Wonders of the World whose location and existence hasn't been completely confirmed. This structure may have featured stacked terraces of plants and wildlife.

ANSWER: **Hanging Gardens** of Babylon

Babylon was located along the banks of this river that, along with its companion the Tigris River, was the source of water for much of Mesopotamia.

ANSWER: **Euphrates** [yoo-fray-teez] River

(18) An essay about this man's "Literary Offenses" criticized his novel *Deerslayer* for a scene in which Chingachgook finds tracks in a streambed that somehow haven't been washed away by the stream, and derided his novel *Pathfinder* for a scene in which Hawk-eye performs a completely impossible act of marksmanship. For ten points each,

Name this author who included *Deerslayer* and *Pathfinder* in his *Leatherstocking Tales*, a series of books about frontiersman Natty Bumppo.

ANSWER: James Fenimore **Cooper**

This novel is chronologically the second of the *Leatherstocking Tales* series. In this novel, Magua kidnaps Cora Munro and then stabs Uncas in the back, leaving Uncas's father, Chingachgook, alone.

ANSWER: The **Last of the Mohicans**

This American author criticized *Deerslayer* and *Pathfinder* in the essay "Fenimore Cooper's Literary Offenses," and was himself the author of *A Connecticut Yankee in King Arthur's Court* and *The Adventures of Huckleberry Finn*.

ANSWER: Mark **Twain** (accept Samuel Langhorne **Clemens**)

(19) This group of elements is the only one that has members in solid, liquid, and gaseous forms at room temperature. For ten points each,

Name this highly reactive group of elements found just left of the noble gases on the periodic table.

ANSWER: **halogens** (accept Group **17**)

This lightest halogen is the most electronegative element on the Pauling scale. This element is used in toothpaste and drinking water to prevent cavities.

ANSWER: **fluorine** (accept **F**; do not accept or prompt on "fluoride")

This seventeenth element on the periodic table is commonly used to disinfect swimming pools.

ANSWER: **chlorine** (accept **Cl**; do not accept or prompt on "chloride")

(20) Metronomes are tools used to set and maintain this concept in music. For ten points each,

Give this term defined as the speed of music. This concept can be measured in beats per minute and is described by Italian terms such as *adagio* and *presto*.

ANSWER: tempo

This Italian word, translated as “cheerful,” describes tempos faster than *moderato* and slower than *presto*.

ANSWER: allegro

Music in a faster tempo often substitutes common time with this other time signature, written as a C with a slash through it.

ANSWER: cut time (accept alla breve; accept two-two time)