

## Round 8

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### Tossups

(1) **This god granted Caenis’s wish to be turned into a man after he raped her. This god built the walls of Troy with Apollo, and delayed Odysseus’s return to Ithaca as revenge for blinding his son, the (\*) cyclops Polyphemus.** This creator of the first horse was the father of Pegasus, and made Pasiphaë fall in love with a bull as revenge against Minos. This god lost a competition to be the patron of Athens by giving the gift of a salt spring. For ten points, name this Greek god of the sea.

ANSWER: Poseidon

(2) **The third object with this name contained faulty components that prevented it from mapping the Van Allen belt during the International Geophysical Year. A dog named (\*) Laika became the first animal in space aboard the second of these objects and, in 1957, the first object with this name kicked off the Space Race.** For ten points, name this series of Soviet spacecraft that included Earth’s first artificial satellite.

ANSWER: Sputnik program (accept Sputnik 1, 2, or 3; prompt on “satellite” before it is read)

(3) **One of this group’s fatalities, Karl Volfinger, was killed while burying his supplies. James Reed survived this expedition after being expelled for killing John Snyder, one of this group’s (\*) wagon drivers.** Other members of this group died crossing the Sierra Nevada after they used the Hastings Cutoff to leave the Oregon Trail. For ten points, name this infamous party that resorted to cannibalism while snowed-in in a namesake pass.

ANSWER: Donner Party

(4) **The Beveridge curve plots the vacancy rate against this economic quantity. This quantity is called “structural” when it is caused by a gap in the skills demanded by firms and supplied by the market. The 2021 Great (\*) Resignation is actually having a low impact on this because of a high retirement rate.** Automation threatens to cause an increase in this quantity as certain jobs become obsolete. For ten points, name this measurement of the number of people out of work.

ANSWER: unemployment rate

(5) **This play’s title character is told that “none of woman born / shall harm” him by the Weird Sisters. A woman crazily mutters “out, damned spot” while consumed with guilt for convincing her husband to kill King (\*) Duncan in this play.** The Thane of Cawdor sees the ghost of Banquo and is convinced he does not need to fear Macduff in, for ten points, what Shakespeare work nicknamed the “Scottish play?”

ANSWER: Macbeth (accept The Tragedy of Macbeth)

(6) **In a painting by Thomas Eakins, a woman in black sobs into her sleeve while a man with this profession stands in front of a crowded theater with red-stained hands. Rembrandt painted a group of people with this job watching Nicolaes Tulp give an (\*) *Anatomy Lesson*.** For ten points, name this profession held by Hayes Agnew and Samuel Gross, who were painted demonstrating surgeries in progress.

ANSWER: doctors (accept equivalents like surgeons or physicians; accept answers describing professors of medicine or professors of surgery; prompt on “teachers” or “professors” by asking “what do they teach?”)

(7) **In a game, this character teams up with an alien wisp called Yacker to stop an evil plot disguised as an amusement park. In a cartoon, this character solves problems on Seaside Island with his namesake “Team,” including (\*) Miles Prower.** This character’s first live-action film was significantly delayed due to backlash over his design, and features Ben Schwartz as this character. For ten points, name this speedy video game protagonist who works with Tails to save the world from Doctor Eggman.

ANSWER: Sonic the Hedgehog (accept Sonic Colors; accept Sonic Boom)

(8) **The RC circuit constant, tau, is a value of this quantity, which is the independent variable when taking a dot derivative. Multiplying the square of this quantity by one-half of little *g* gives free fall displacement. One unit of this quantity is based on the hyperfine transition of (\*) cesium-133.** This quantity dilates at near-light speed, which can be calculated by dividing distance by this quantity. For ten points, name this quantity measured in minutes and seconds.

ANSWER: time

(9) **This novel’s protagonist wins a guessing game by tearing out the eye of a giant. Two characters in this novel write political essays under the pseudonyms Locke and Demosthenes. In this novel, armies equipped with freeze guns battle in (\*) null gravity, and the protagonist of this novel befriends Bean, who helps him use “Dr Device” to destroy the home planet of the buggers.** For ten points, name this novel by Orson Scott Card in which Andrew Wiggins attends battle school.

ANSWER: Ender’s Game

(10) **This structure was destroyed after Gunther Schabowski’s accidental declaration that a policy would go into effect “immediately.” Peter Fechter [fesh-ter] bled to death at this structure as guards threatened to (\*) shoot potential helpers.** “Brain drain” was meant to be prevented by this “anti-fascist bulwark.” Checkpoint Charlie was a border control on, for ten points, what structure that, until 1989, separated East and West Germany within a capital city?

ANSWER: Berlin Wall

(11) **This musical instrument duets with Don Cherry’s cornet on the Ornette Coleman album *The Shape of Jazz to Come*. A player of this instrument collaborated with trumpeter Benny Harrison on the song “Ornithology,” and another player of this instrument was known for his (\*) “sheets of sound” on albums like *A Love Supreme* and *Giant Steps*.** Charlie “Bird” Parker and John Coltrane played, for ten points, what woodwind instrument, whose E-flat “alto” version has a bent metal body and a jazzy, raspy tone?

ANSWER: saxophone (accept specific types, such as alto saxophone)

(12) **This language was used to write works like *The Labyrinth of Solitude* and *Sunstone*. The author of *The Death of Artemio Cruz* wrote in this novel, which he also used for the novel *The Old* (\*) *Gringo*, which describes a North American country's twentieth-century revolution. For ten points, name this language of European origin that was used by Carlos Fuentes and Octavio Paz, two authors from Mexico.**

ANSWER: Spanish (accept español; accept Mexican Spanish or español mexicano)

(13) **If  $n$  both is “one less than a power of two” and is this type of number, then  $n$  is the only odd factor of a perfect number. The Goldbach conjecture states that every even number greater than two can be written as the sum of two of these numbers; for example, “twenty equals (\*) seven plus thirteen.” “Ambiguous factorization” is a reason why the number one is not considered to be, for ten points, what type of number that has only two factors: itself and one?**

ANSWER: prime number(s)

(14) **In 2018, Eric Greitens resigned as this state's governor after being charged with felonies related to a love affair. Mike Parson is the current governor of this state, whose junior senator rose his fist in support of the (\*) January 6th insurgency at the US Capitol and has refused to resign. Josh Hawley continues to represent, for ten points, what midwestern state whose capital is Jefferson City?**

ANSWER: Missouri

(15) **Many examples of these compounds begin as resins. Urea-formaldehyde forms one of these compounds that acts as a concrete binder. A Ziegler-Natta catalyst can promote the step-growth mechanism to make these compounds. Vinyl acetate is used to synthesize several (\*) plastic types of these compounds, and isoprene sub-units allow latex to harden into natural rubber ones. Rayon and nylon are, for ten points, what large compounds made from chains of monomers?**

ANSWER: polymers

(16) **A namesake species of pink rattlesnake is endemic to this natural feature. Supai Village, the capital of the Hava-supai Indian Reservation, is located within this feature, which is the gateway to the afterlife in Hopi religion. The Kaibab Plateau is (\*) bisected by this natural feature, which became a national park after John Wesley Powell mapped it in what is now Arizona. The Colorado River carved out, for ten points, what absurdly large gorge in the American southwest?**

ANSWER: Grand Canyon (accept Öngtupqa)

(17) **This substance and lawfulness are the domain of Asha Vahista, one of six divine beings created by Ahura Mazda. Atash Bahram is the highest classification of this substance, which is always present at an (\*) agiary. Holy ones of this substance may never be extinguished, so priests must wear a face mask when handling it. Atar is, for ten points, what substance venerated as wisdom and light in Zoroastrianism, and which is kept burning in namesake temples?**

ANSWER: holy fires (accept flames; accept Atar before it is read; accept Atash or Azar before “Atar” is read)

(18) **One pathogen in this family causes bluecomb disease in turkeys, and another may be carried by the Asian palm civet. The National Wastewater Surveillance System tracks one of these pathogens, others of which have caused (\*) MERS and SARS epidemics. Named for envelope spikes that resemble a layer of the Sun, this virus is combated by RNA vaccines from Moderna and Pfizer. For ten points, name this virus responsible for the COVID-19 pandemic.**

ANSWER: coronavirus (accept Coronaviridae; accept SARS-CoV-2; accept COVID and COVID-19 before “COVID-19” is read; prompt on “virus” before it is read; prompt on “MERS” and “SARS” before they are read)

(19) **A “Witness” one of these objects titles a Pulitzer-winning poetry collection by Robert Frost. In the poem “Mending Wall,” Frost argues that objects of this type cannot “get across and eat the (\*) cones” under another type of these plants. In a poem titled for a type of these plants, Frost describes boys “swinging” in these things after “climbing carefully to the top branches.” For ten points, name these tall plants in the poem “Birches.”**

ANSWER: trees (accept A Witness Tree; accept apple trees or pine trees; accept Birches; prompt on “apple” after “get across” is read)

(20) **The last woman to be hanged in Massachusetts was Rachel Wall, who was executed for doing this. Despite angering the English by engaging in this profession, Grace O’Malley met with Elizabeth I as an equal. (\*) Mary Read and Anne Bonny, who received delayed death sentences by claiming to be pregnant, performed this job for Calico Jack. Ching Shih oversaw hundreds of ships as one of the most successful members of, for ten points, what criminal profession on the high seas?**

ANSWER: piracy (accept word forms and equivalents relating to “being a pirate”)

## Bonuses

(1) Nicotine addiction results when the drug binds to receptors for this neuro-transmitter in the brain. For ten points each,

Name this neurotransmitter released by motor neurons to stimulate contraction of skeletal muscles. Voluntary movement requires that this neurotransmitter not be inhibited.

ANSWER: acetylcholine (accept ACh)

Powerful inhibitors of the acetyl-choline receptor system are found naturally in the venom of some of these animals, such as the sea krait and black mamba.

ANSWER: snakes (accept serpents or Serpentes)

Another acetylcholine inhibitor is botulinum toxin, which can smooth wrinkles, but also causes a deadly form of this condition when present in canned goods.

ANSWER: food poisoning (anti-prompt on “botulism” by asking “what type of condition is botulism?” but do not accept or prompt on other types of food poisoning)

(2) Maurice Ravel and this composer have both been called musical “Impressionists,” although they both rejected the label. For ten points each,

Name this French composer who wrote the symphonic poem *Prelude to the Afternoon of a Faun*, the opera *Pelléas et Mélisande*, and the orchestral suite *La Mer*.

ANSWER: Claude Debussy (accept Achille Claude Debussy)

Debussy created an arrangement of *La Mer* for four hands, which requires two people to play this common keyboard instrument with black and white keys.

ANSWER: piano (accept pianoforte or fortepiano; accept specific answers like grand piano)

In *Prelude to the Afternoon of a Faun*, the flute plays a solo using this kind of scale. On the piano, this kind of scale can be played using the twelve black and white keys between one note and the octave above it.

ANSWER: chromatic (accept chromatic scale; accept word forms like chromaticity)

(3) Legendary figures are popular topics in literature. Answer the following about literary characters drawn from European legends, for ten points each.

This English hero helps William of Ivanhoe in a novel by Sir Walter Scott. This skilled archer led the Merry Men in a quest to rob the rich and give to the poor.

ANSWER: Robin Hood (accept either underlined name; accept either underlined name of Robin of Locksley; the novel is *Ivanhoe*)

This legendary German figure negotiates with Mephistopheles to gain magical powers in works by Christopher Marlowe and Johan Wolfgang von Goethe [gur-tuh].

ANSWER: Faust (accept Doctor Faustus or The Tragical History of the Life and Death of Doctor Faustus; accept Johan Georg Faust)

This modern country is the home of *The Song of Roland*, a poem about a legendary general who served under Charlemagne, wielded the sword Durendal, and burst his temples while blowing his oliphant horn during a battle.

ANSWER: France (accept French Republic; accept La France; accept République française)

(4) Failure to uphold this document's Clause Sixty-One led to the First Barons War. For ten points each,

Name this document that guaranteed certain rights for nobles, as well as a system of balances against the king's rule. It was signed in 1215 by King John.

ANSWER: Magna Carta Libertatum (accept Great Charter of Freedoms)

The Magna Carta was written for this country, which later merged with Scotland to form the Kingdom of Great Britain.

ANSWER: Kingdom of England (do not accept or prompt on "Great Britain")

The Magna Carta created the first modern form of this English governing body, which in modern times is made up of the House of Lord and House of Commons.

ANSWER: English Parliament (accept Parliament of England; accept Parliament of the United Kingdom)

(5) This author recounted her lifelong friendship with her teacher Anne Sullivan in *The Story of My Life*. For ten points each,

Name this prolific Alabama activist and author who learned new communication strategies after losing her sight and hearing to illness as a young child.

ANSWER: Helen Keller (accept Helen Adams Keller)

Helen Keller was a founding member of this nonprofit organization, which developed out of the CLB in 1920. This organization focuses on defending constitutional rights and social welfare in court.

ANSWER: ACLU (accept American Civil Liberties Union)

Keller was an active member of this political party, and supported its candidate Eugene V. Debs. Upton Sinclair's novel *The Jungle* was an attempt to sway readers to join this populist political party.

ANSWER: socialism (accept word forms like socialists; accept Socialist Party (of America) or SPA)

(6) The metal activity series predicts that aluminum will take the place of silver in a solution due to one of these reactions. For ten points each,

Name this type of chemical reaction in which one element replaces another in a compound. These reactions have the general form “A plus B C yields B plus A C.”

ANSWER: single-displacement reaction (accept single-replacement reaction)

The first metals in the activity series, including potassium and lithium, are all members of this highly reactive group.

ANSWER: alkali metals (accept Group 1; do not accept or prompt on “alkaline metals” or “alkaline earth metals”)

At the bottom of the activity series is this transition metal, found in a car’s catalytic converter, that is more expensive than gold when used in jewelry.

ANSWER: platinum (accept Pt)

(7) This biblical book describes the resurrection of Dorcas, God’s smiting of Sapphira, and multiple religious conversions. For ten points each,

Name this book from the Christian New Testament that follows the four canonical gospels and describes the doings of the Apostles.

ANSWER: Book of Acts (accept Acts of the Apostles)

Much of the Book of Acts concerns the travels of this Apostle from Tarsus. This man changed his name after a spiritual encounter on the way to Damascus inspired him to convert.

ANSWER: Saint Paul the Apostle (accept Saul of Tarsus)

This woman, who was a merchant of purple dye, was converted to Christianity by Paul. In the Book of Acts, she lets Paul stay with her family during his travels.

ANSWER: Saint Lydia of Thyatira

(8) Give the following about museums in Chicago, for ten points each.

A well-preserved Tyrannosaurus Rex skeleton nicknamed Sue is found in this Chicago natural history museum, found by the lakeshore in Chicago’s Museum Campus.

ANSWER: Field Museum of Natural History

The Field Museum is next door to one of these facilities, named for John G. Shedd, that includes exhibits like the Caribbean Reef and the Waters of the World.

ANSWER: Shedd Aquarium

Just east of the Field Museum and Shedd Aquarium is one of these facilities, named for businessman Max Adler, that includes the Doane Observatory and an Astronomical Museum.

ANSWER: Adler Planetarium

(9) The Housebuilder Theorem notes that if this shape's diagonals are congruent, then this shape is actually a rectangle. For ten points each,

Name this type of quadrilateral defined by the fact that it has two pairs of opposite sides that, if extended infinitely far, would never intersect.

ANSWER: **parallelogram** (do not accept or prompt on "square")

This term is given to a three-dimensional figure whose six faces are all parallelograms. Cubes and rectangular prisms are this type of figure with extra restrictions.

ANSWER: **parallelepiped**

The area of a parallelogram is equal to the product of the diagonals, the sine of an angle created by the diagonals, and this fraction. This fraction also appears in several formulas for the area of a triangle.

ANSWER: **one-half**

(10) A play about this historical event uses it as an allegory for Joseph McCarthy's hunt for communists in the American government. For ten points each,

Name this 1690s event during which Giles Corey and John Proctor were executed for supposedly casting spells in a colonial Massachusetts town.

ANSWER: **Salem witch trials** (prompt on partial answers)

The Salem witch trials allegorize McCarthyism in this Arthur Miller play, in which Abigail Williams accuses Elizabeth Proctor of witchcraft.

ANSWER: The **Crucible**

In *The Crucible*, Abigail Williams begins making accusations after she and her friends are found dancing naked in the forest to help this Barbadian slave cast a hex on Elizabeth Proctor.

ANSWER: **Tituba**

(11) Elamite and Akkadian are among the languages that were written in this system despite not being native languages of the civilization that invented it. For ten points each,

Name this writing system, developed by the Sumerians, that uses a reed stylus to make wedge-shaped impressions on clay tablets.

ANSWER: **cuneiform**

The Sumerians and Babylonians flourished in this region with a Greek name. This region in the "fertile crescent" was a center of early agriculture, since the plow was invented here.

ANSWER: **Mesopotamia**

Mesopotamia is Greek for "the land between the rivers;" specifically, between the Euphrates [yoo-fray-tees] and this other major Middle Eastern river.

ANSWER: **Tigris** River



(12) In parts of India and sub-Saharan Africa, this insecticide is no longer used to control malaria because twenty-five percent of the mosquito population is resistant to it. For ten points each,

Name this pesticide developed by Paul Müller that was widely used in agriculture and urban areas after the Second World War. Its 1972 ban in the US was prompted by its destructive impact on wildlife.

ANSWER: **DDT** (accept **dichloro-diphenyl-trichloroethane**)

The environmental hazards of DDT became widely known because of this 1962 Rachel Carson book. This book's title effect is a result of DDT killing all the birds.

ANSWER: **Silent Spring**

*Silent Spring* noted that ingestion of DDT caused the thinning of these reproductive structures. In birds, the chemical causes these structures to crack before the young inside can develop and hatch.

ANSWER: **eggshells**

(13) In these islands' religion, the deity Ku'ula controls the fish in the sea. For ten points each,

Name this set of islands, an American state whose native religion considers sites like Mauna Loa and Mauna Kea to be sacred.

ANSWER: **Hawai'i** (accept **Hawaiian** Islands; prompt on "Polynesia")

This traditional dance in Hawaii is often accompanied by chant or song and was used for storytelling and rituals. Before performing, dancers may make offerings to Laka, a patron of this dance.

ANSWER: **hula**

This Goddess of volcanoes brought fire to the Hawaiian islands and lives in Mount Kilauea. During a sled race, she started a fight with the snow Goddess Poli'ahu [**poh-lee-ah-hoo**] due to jealousy.

ANSWER: **Pele** [**peh-leh**] (accept Madame **Pele** or Tutu **Pele**)

(14) This poet wrote a collection that declares "tonight, I can write the saddest lines," and that ends with a poem that laments "in you, everything sank." For ten points each,

Name this poet of *Twenty Love Poems and a Song of Despair*.

ANSWER: Pablo **Neruda** (accept Ricardo Eliécer Neftalí **Reyes** Basoalto)

Pablo Neruda was a writer from this South American country, whose capital is Santiago.

ANSWER: **Chile** (accept Republic of **Chile**; accept República de **Chile**)

Neruda's poetry was described as "[bringing] alive a continent's destiny and dreams" when he was given this prize in 1971. This specific prize was established in 1901 by the estate of a Swedish inventor.

ANSWER: **Nobel** Prize in **Literature** (both underlined words required; accept other word orders like **Literature Nobel**; prompt on answers like "Nobel" or "Nobel Prize" that don't mention literature specifically)

(15) This man's final written words included the note "I [...] am now quite certain that the crimes of this guilty land will never be purged away, but with Blood." For ten points each,

Name this abolitionist who, in 1859, became the first person to be executed for treason by the United States.

ANSWER: John **Brown**

John Brown was hanged after his failed attempt to raid the arsenal at this town in what is now West Virginia.

ANSWER: **Harpers Ferry**

Prior to working as a nurse, spy, and raider for the Union during the Civil War, this abolitionist recruited supporters for Brown's raid on Harpers Ferry. More famously, this woman guided dozens of escaped slaves along the Underground Railroad.

ANSWER: Harriet **Tubman** (accept Araminta **Ross**)

(16) A 2021 article in *Scientific American* explains "Why [this field] Matters," despite being commonly cited as the least valuable undergraduate major. For ten points each,

Name this social science that is concerned with culture and society on a wider scale than sociology.

ANSWER: **anthropology** (accept word forms like **anthropologists**)

The *Scientific American* article focuses on anthropology's role in the evolving understanding of this concept as a social, not biological, construct, as well as its historical use in justifying discrimination based on skin color.

ANSWER: **race** (accept word forms like **racism**)

This 20th century pioneer claimed that the purpose of anthropology "is to make the world safe for human differences." This compatriot of Margaret Mead analyzed the differences between America and Imperial Japan during World War II in *The Chrysanthemum and the Sword*.

ANSWER: Ruth **Benedict** (accept Ruth Fulton **Benedict**)

(17) When Louis Pasteur said "chance favors the prepared mind," he was referring to the work of this Danish physicist. For ten points each,

Name this man who observed in 1820 that a compass needle was deflected from north by a current-carrying wire nearby.

ANSWER: Hans Christian **Oersted**

Oersted's observations proved that an electric current generates this type of field. The Earth's field of this type has an average strength around fifty micro-teslas.

ANSWER: **magnetic** field

Under Oersted's law, the direction of the magnetic field can be determined using this kind of rule, in which the thumb points in the direction of the current and the fingers are curled.

ANSWER: **right hand** rule

(18) A literary character with this profession tells the tales of Palamon and Arcite to a group of pilgrims that includes a Miller and a Clerk. For ten points each,

Name this job. In a Middle English work, a character with this profession who has participated in multiple crusades is accompanied by his son, who serves as his Squire.

ANSWER: knight (prompt on answers like “warrior” or “soldier”)

The Knight, the Miller, and the Clerk gather at the Tabard Inn on their way to the shrine of Thomas Becket in this poetic short story collection, in which a group of travelers tell each other stories to pass the time.

ANSWER: The Canterbury Tales

This Middle English author wrote *The Canterbury Tales*, as well as *The Parlement of Foules* and *Troilus and Criseyde*.

ANSWER: Geoffrey Chaucer

(19) In an animated spin-off of this television series, series regular Majel Barrett voiced the feline Lieutenant M'Ress [muh-ress]. For ten points each,

Name this 1960s TV show that starred William Shatner as Captain James Tiberius Kirk.

ANSWER: Star Trek: the Original Series (accept TOS)

On the Original Series, Leonard Nimoy played this half-Vulcan, half-human science officer, Captain Kirk's second-in-command, who prizes logic above all else.

ANSWER: Mr. Spock (accept Commander Spock; accept S'chn T'gai Spock)

In a move that would complicate storylines for decades, *Star Trek* producer Gene Coon dictated that Captain Kirk and his crewmates on the *Enterprise* must follow this Starfleet rule never to interfere with the natural development of alien societies.

ANSWER: Prime Directive

(20) In a painting of this scene, Judas clutches a bag of silver while the other disciples react to the revelation that Jesus will be betrayed by one of them. For ten points each,

Name this biblical scene. In a painting of this scene by Leonardo da Vinci, Jesus spreads his hands over the table where he and his disciples eat a meal together.

ANSWER: The Last Supper (accept l' Ultima Cena)

Judas kneels across the table from the other disciples in this artist's diagonally-aligned painting of *The Last Supper*. This Italian Mannerist also painted *Paradiso* and *The Miracle of the Slave*.

ANSWER: Tintoretto (accept Jacopo Robusti)

Judas is absent from Albrecht Dürer's depictions of *The Last Supper*, which he created by printing with blocks of this material. To make block prints, artists carve along the grain of this natural material.

ANSWER: wood (accept woodcuts or woodblock prints)