

Round 7

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Sophie Netzel • Lauren Onel • Aleija Rodriguez • Zane Smalley • Kristin Strey
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Tossups

(1) **At this battle, William II of the Netherlands suffered a bullet wound and was knocked off his horse at a spot now commemorated by the 140-foot-tall Lion’s Mound. The battles of Ligny [lihn-ye] and Quatre Bras [KAHT-rah brah] were fought two days prior to this battle, where (*) Blucher’s [bloo-ker’s] Prussians broke through the right flank. The Seventh Coalition’s victory in this battle doomed the losing general to exile for the second time. For ten points, name this 1815 battle, the final defeat of Napoleon.**

ANSWER: Battle of Waterloo

(2) **By 2030, half of Vietnam’s farmland may be ruined by an intrusion of this substance. Domes of this substance are often drilled to access trapped oil. Halite is the mineral form of this substance, which is found in large amounts in both the (*) Bonneville Flats and Dead Sea. For ten points, name this substance with an average concentration of 3.5% in seawater, whose chemical name is sodium chloride.**

ANSWER: salt (accept NaCl or sodium chloride before “sodium chloride” is read)

(3) **The protagonist of this novel secretly reads *The Theory and Practice of Oligarchical Collectivism* in a room above Mr Charrington’s shop while on break from the Ministry of Truth. In this novel, dissident citizens of Airstrip One are sent to (*) Room 101 to be tortured with their worst fear. In this novel, Winston Smith meets with Julia and is arrested for thoughtcrime against Big Brother. For ten points, name this dystopian novel, set in the title year, written by George Orwell.**

ANSWER: Nineteen Eighty-Four

(4) **This piece in D-flat major opens with a softly trilled A-flat before a run of eighth notes. This piece, which is in three-four time, was dedicated to Delfina Potocka, a countess whose small dog enjoyed chasing its (*) tail, inspiring this piece. For ten points, name this piano piece by Frederic Chopin [sho-pan], a waltz whose name doesn’t actually mean it should be played in 60 seconds.**

ANSWER: Minute Waltz (“Waltz” not needed after it is said; accept Valse du petit chien or Waltz of the Little Dog before “small dog” is read; accept Waltz in D-flat Major, Opus 64 No. 1)

(5) **A character in this film “never looks back” because it “distracts from the now,” and mocks supermodels. In this film, the password “KRONOS” is used to discover the secret behind the (*) Omnidroid. This film’s villain, Syndrome, is sucked into a jet engine by his cape, a fashion choice that Edna Mode would never have allowed. A sequel was released in 2018 for, for ten points, what 2004 Pixar film about the Parr family, which includes Elastigirl and other “supers?”**

ANSWER: The Incredibles (do not accept or prompt on “The Incredibles 2”)

(6) The 1670 work *Pensées* [pahn-say] argues in favor of this concept with an example involving a wager, noting that betting against this concept has the possibility of infinite loss. Thomas Aquinas offered five arguments in favor of this concept, which (*) Pascal's Wager argues rational people should accept. For ten points, name this theological position that is opposed by atheists.

ANSWER: existence of (a Christian) god (accept descriptive answers related to belief in a god)

(7) In the Mahabharata, this god gives the Pashupatastra arrow to Arjuna, and he appeared in a pillar of flame as Nataraja. This god drank Halahala and cut off his son's head while trying to reach his wife, (*) Parvati. Ganesha received the head of an elephant from this god, whose consumption of poison turned his throat blue. For ten points, name this three-eyed Hindu destroyer god, a member of the Trimurti along with Brahma and Vishnu.

ANSWER: Shiva

(8) Improved precision in measuring the position implies worse precision in measuring this quantity, according to Heisenberg's uncertainty principle. Unlike kinetic energy, this quantity is conserved in both elastic and inelastic (*) collisions. The recoil of a rifle is a demonstration of, for ten points, what physical quantity, equal to mass times velocity, that describes how much impact a moving body can have in a collision?

ANSWER: linear momentum (do not accept or prompt on "angular momentum")

(9) This country controlled an island that the Teller Amendment guaranteed would not be annexed by the US. A war against this country was supported by William Randolph Hearst, whose "yellow journalism" blamed the sinking of the USS (*) *Maine* in Cuba on this country. Teddy Roosevelt led the Rough Riders in an 1898 war against, For ten points, what European country that gave the Philippines and Puerto Rico to the US and whose capital is Madrid?

ANSWER: Spain

(10) This short story's protagonist is told to wear "two or three gorgeous roses" to the Ministry of Education ball, but instead she borrows a decoration from Madame (*) Forestier [foh-ress-tee-AY] that she later discovers is worth only a few francs. For ten points, name this short story by Guy de Maupassant [ghee duh moh-pah-SAWN], in which Mathilde Loisel [mah-TEELD lwah-ZELL] struggles for ten years to replace the title fake piece of jewelry.

ANSWER: The Necklace (accept The Diamond Necklace; accept La Parure)

(11) In many stories, this man told King Vortigern a story about a pair of sleeping dragons under his castle. This man was credited with using advanced machines to move the rocks of Stonehenge to their current place. This man was trapped in a cave by (*) Nimue after living his life backwards, and he served as an advisor to a "once and future King." For ten points, name this creator of the Round Table, a famous wizard who served King Arthur.

ANSWER: Merlin (accept Merlinus Ambrosius; accept Myrddin Emrys; prompt on "Emrys" or "Ambrosius" alone)

(12) **The symmetric group of this many elements is the smallest that is not a solvable group, a result that inspired the Abel-Ruffini theorem. This is the central number of the only 3-by-3 magic square. There are this many (*) Platonic solids, and there are this many complex solutions to a quintic polynomial. The only odd proper factor of ten is, for ten points, what prime number, the number of sides of a pentagon?**

ANSWER: five

(13) **This poet described a time when “the great star early droop’d in the western sky” and a coffin passed “through lanes and streets.” This author addressed the poems “When Lilacs Last in the Dooryard Bloom’d” and “Oh Captain! My Captain!” to (*) Abraham Lincoln. For ten points, name this American poet who wrote “I celebrate myself and sing myself” in “Song of Myself,” and whose poems were collected in *Leaves of Grass*.**

ANSWER: Walter “Walt” Whitman

(14) **This man’s second wife, Peggy Shippen, helped him work with John André, who was hanged after being caught with letters written by this man. A monument of this man’s (*) boot was built at the site of the Battle of Saratoga, where this man’s efforts went unrewarded. For ten points, name this Revolutionary War general who plotted to betray West Point to the British.**

ANSWER: Benedict Arnold

(15) **Decline at the apex of these constructs can result in mesopredator release. The ten percent rule explains why these pathways rarely have more than five (*) trophic levels. Primary producers form the base of these pathways, whose links are connected by decomposers. For ten points, name these lists of organisms that show the transfer of matter and energy from plants to herbivores to carnivores.**

ANSWER: food chains (accept food webs or food pyramids)

(16) **This empire’s capital city was built south of Tlatelolco [t-lah-tell-ohl-koh] on a small island in Lake Texcoco [tesh-koh-koh]. Pedro de Alvarado helped lead an escape from this empire’s capital city during La Noche Triste [lah noh-chay tree-stay] after his men murdered (*) Montezuma II. Hernan Cortez conquered, For ten points, what empire whose ruined capital of Tenochtitlan was built in what is now Mexico City?**

ANSWER: Aztec Empire

(17) **In this story, a man pretending to be the brother of Mustafa the Tailor traps Mustafa’s son in a booby-trapped cavern. A princess in this story is fooled into giving away a magical (*) artifact to a sorcerer who is trying to take possession of a magical creature who grants wishes. For ten points, name this story, a late addition to *The One Thousand and One Nights*, in which the title man rubs a magical lamp to release a djinn.**

ANSWER: Aladdin (accept Ala ad-Din; accept The Wonderful Lamp or The Miraculous Lamp or The Wonderful Lamp until “lamp” is read; accept Aladdin and the Magic Lamp)

(18) **This river may originate at the usually-dry Trewsbury Mead, or at a location known as Seven Springs, which would make this river its country's longest, surpassing the (*) Severn.** This river, whose name comes from the Celtic for “dark,” is called the Isis where it flows through Oxford. Tower Bridge crosses this river just east of St. Paul's Cathedral. For ten points, name this English river that flows through London.

ANSWER: Thames River

(19) **This man's insistence on a static universe led him to call the cosmological constant his “biggest blunder.” The observation of starlight bending during a solar eclipse validated this man's concept of (*) spacetime.** He received the 1921 Nobel for his work on the photoelectric effect, but was refused the prize for formulating his most famous theory. For ten points, name this scientist who modernized cosmology by incorporating gravity into his theory of general relativity.

ANSWER: Albert Einstein

(20) **This woman is the subject of *L.H.O.O.Q.* [el-osh-oh-oh-koo], a work in which Marcel Duchamp added a moustache to a postcard of this woman. Overcleaning of a painting of this woman is blamed for her missing (*) eyebrows and the transparency of her delicate black veil.** For ten points, name this woman, thought to be the wife of Francesco del Giocondo, who has an enigmatic smile in a painting by Leonardo da Vinci.

ANSWER: Mona Lisa (accept La Gioconda before “Giocondo” is read; accept either name of Lisa Gherardini)

Bonuses

(1) This religion holds that the Buddha, Mohammad, and Jesus are all manifestations of a single god. For ten points each,

Name this off-shoot of Islam founded by the Báb. This religion is led by a ruling body called the Universal House of Justice, and divides a year into nineteen months of nineteen days each.

ANSWER: Baha'i Faith

Followers of Baha'i [bah-hah-ee] believe that neither hell nor this pleasant afterlife have physical locations. Rather, they believe that this location is a spiritual state especially near to God.

ANSWER: heaven

Adult Baha'is are required to perform an "obligatory" form of this action once daily while facing the shrine of Bahá'u'lláh, who wrote the standard text for these religious actions. In Islam, this action is performed while facing the Ka'aba in Mecca.

ANSWER: prayer

(2) This short story concludes that "of all who give gifts," this story's protagonists "were the wisest." For ten points each,

Name this short story in which Della cuts her hair to buy a chain for her husband, James, only to discover that he has sold his watch to buy a present for her.

ANSWER: The Gift of the Magi

In "The Gift of the Magi," Jim buys these jeweled decorations for Della with the money gained by selling his watch.

ANSWER: combs

"The Gift of the Magi" is a short story by this author, who also wrote "A Retrieved Reformation" and "The Ransom of Red Chief."

ANSWER: O. Henry (accept William Sydney Porter)

(3) The “Crime of ‘73” ended a policy in which people who owned this commodity could freely have it struck into coins at the Mint. For ten points each,

Name this precious metal that bimetalists wanted the US government to use, along with gold, in the minting of coins.

ANSWER: silver

This bimetalist ran for President in 1896, electrifying the audience at the Democratic National Convention with the “Cross of Gold” speech.

ANSWER: William Jennings Bryan

The biggest support group for free silver was this class of workers, who hoped that the ensuing inflation would help them pay their debts. The Grange was a fraternal organization of these workers, who fueled the rise of a brief Populist Party in the late 1800s.

ANSWER: farmers (accept equivalent answers)

(4) Examples of this symbiotic relationship include cattle egrets that feed on insects stirred up by buffalo; and remoras that attach themselves to sharks. For ten points each,

Name this symbiotic relationship, in which one species benefits while the other is neither helped nor harmed. Humans have this relationship with eyelash mites, and most bacteria that live on our skin.

ANSWER: commensalism

About three-fourths of the species in this plant family are commensalists, growing on the branches of trees. More than one hundred thousand varieties of these flowers are raised in greenhouses, including the one that produces vanilla extract.

ANSWER: orchids (accept Orchidaceae)

The hermit type of these crustaceans act as commensalists by living inside discarded snail shells. Other commercially harvested species of these include the Dungeness and Alaskan king.

ANSWER: crabs (accept hermit crabs; accept Dungeness crabs; accept Alaskan king crabs)

(5) This enormous composite sculpture originally included a depiction of Francesca da Rimini and her lover, Paolo, embracing in *The Kiss*. For ten points each,

Name this massive work depicting scenes from Dante’s *Inferno* that also contains a smaller version of its sculptor’s work *The Thinker*.

ANSWER: The Gates of Hell (or La porte de l’Enfer)

This artist worked on *The Gates of Hell* for half of his life. He also sculpted works such as *The Walking Man* and *The Burghers of Calais*.

ANSWER: Auguste Rodin (accept François Auguste René Rodin)

Rodin [roh-DAN] worked primarily by casting sculptures out of this alloy of copper and tin. Critics falsely accused Rodin of casting his intricate sculpture *The Age of* this material from a living model.

ANSWER: bronze (accept The Age of Bronze; accept airain or L’Age d’airain)

(6) Give the following about the formula for linear equations, “ y equals $m x$ plus b ,” for ten points each.

The m in the formula represents this property of a line, indicating its steepness and direction.

ANSWER: slope

If a line is increasing, m will be this type of number.

ANSWER: positive number (accept equivalent descriptions indicating that m is greater than 0; do not accept information noting that m could be equal to 0)

Consider the line with equation “ y equals $10 x$ plus 10 .” How many of the four quadrants does the graph of this line pass through?

ANSWER: three quadrants

(7) Speakers at this event included David Hogg, who has been accused of being a “crisis actor,” and Emma González, who led a six-minute long moment of silence. For ten points each,

Name this March 24, 2018 demonstration and protest against gun violence, led by survivors of a February 2018 school shooting.

ANSWER: March for Our Lives

González and Hogg attended this school, where 17 students and staff were killed in the aforementioned February 2018 attack.

ANSWER: Marjory Stoneman Douglas High School

Stoneman Douglas High School is located in this state. In 2016, 49 people were killed in the Pulse nightclub shooting in this state’s city of Orlando.

ANSWER: Florida

(8) The owner of one of these animals meets her lover at a performance of *The Geisha*. For ten points each,

Name this animal. In the aforementioned short story, Dmitri Gurov begins an affair with Anna after meeting her in Yalta where she is walking one of these animals, a small Pomeranian.

ANSWER: lapdog (accept pet dog; accept little dog; accept sobachkoy; accept The Lady with the Dog; accept The Lady with the Lapdog; accept The Lady with the Pet Dog; accept The Lady with the Little Dog; accept Dama s sobachkoy)

“The Lady with the Dog” is a short story by this Russian author of plays like *Ivanov*, *Uncle Vanya*, and *The Seagull*.

ANSWER: Anton Pavlovich Chekhov

In this Chekhov play, the title property is chopped down and replaced with cottages by the merchant Lopakhin, who purchases the title grove from Madame Ranevskaya.

ANSWER: The Cherry Orchard (accept Vishnyovy sad)

(9) The upper hand in this war shifted drastically after a 17-year-old peasant girl with religious visions joined the army in 1429. For ten points each,

Name this war between England and France that began in 1337.

ANSWER: Hundred Years' War

In 1429, the French lifted a six-month-long siege of this vital city on the Loire River, preventing the English from taking southern France.

ANSWER: Siege of Orléans

This peasant girl inspired troops at Orléans [ohr-lay-OWN] and led the French to Reims [rehm]. She was captured at Compiègne [com-pee-yen] by the Burgundians and burned at the stake after a show trial.

ANSWER: Saint Joan of Arc (accept Jeanne d'Arc; accept Saint Joan; accept Saint Jeanne; prompt on Joan)

(10) On National Weather Service maps, two types of these features are marked with lines of blue triangles or red semicircles. For ten points each,

Name these boundaries between air masses of different temperature and density. Thunderstorms and other severe weather typically form along one of these boundaries.

ANSWER: weather fronts (accept warm front, cold front, stationary front, or occluded front)

Besides fronts, weather maps often show these lines that connect locations of equal air pressure. One of these lines that forms a closed loop can mark a high pressure system.

ANSWER: isobars

When a map shows tightly bunched isobars and perpendicular isotherms over land, there is a strong chance one of these rotating storms will form. Many of these occur each year in a namesake alley that stretches from Texas to Minnesota.

ANSWER: tornadoes

(11) Answer the following about the pop culture inspirations of *Binging With Babish*, a popular YouTube cooking channel starring Andrew Rea [ray], for ten points each.

In the most popular video on the channel, Rea makes a Krabby Patty, as made by this yellow Nickelodeon character on his namesake show. He accurately complains that putting the lettuce directly above the meat patty is a terrible idea.

ANSWER: SpongeBob SquarePants (accept either underlined name)

On another episode, Rea makes congee [con-jee], a rice porridge. The congee is topped with eggs and bacon in the shape of a smiley face, the way the dragon Mushu makes it in this 1998 Disney film.

ANSWER: Mulan

Another episode explains how to make this rosewater-flavored confection, which is offered by the White Witch in the *Chronicles of Narnia* and “tastes like potpourri,” according to the video.

ANSWER: Turkish Delight

(12) The prologue of this collection claims that April is when people long to go on pilgrimages and come from every part of England to seek the “holy blissful martyr.” For ten points each,

Name this collection of stories told by a group of pilgrims, including a Knight and a Nun, as they stop at the Tabard Inn on the way to the grave of a famous archbishop, written by Geoffrey Chaucer.

ANSWER: The Canterbury Tales

In the *Canterbury Tales*, this frequently-married woman with a gap in her front teeth tells a story in which Queen Guinevere sends a knight to find what women most desire.

ANSWER: The Wife of Bath (accept The Wife of Bath’s Tale)

In this man’s story, an old carpenter is tricked by his young wife, Alison, and a pair of clerks named Nicholas and Absolon.

ANSWER: The Miller (accept The Miller’s Tale)

(13) Answer these questions about some physical properties used as identifiers in the *CRC Handbook of Chemistry and Physics*, for ten points each.

One column in the table of physical constants lists this property, which is defined as a substance’s ratio of mass to volume. Ice has a value of 0.92 grams per cubic centimeter for this property, allowing it to float in liquid water.

ANSWER: density

While many descriptions of the non-metal elements include the term *brittle*, most metals are described by this word, which means they can be hammered into thin sheets.

ANSWER: malleable (accept malleability)

The *Handbook*’s table of thermodynamic properties includes this one defined as the amount of energy needed to raise the temperature of one gram of a substance by one degree Celsius. Gold has a very low value for this property while liquid water has a value above four.

ANSWER: specific heat capacity

(14) Answer the following about geographic landmarks in California, for ten points each.

This valley of the Mojave Desert reaches nearly 300 feet below sea level at Badwater Basin. Its Furnace Creek set the American record for hottest air temperature in 1913.

ANSWER: Death Valley

Less than 100 miles away from Death Valley is this tallest mountain in the lower 48 states. The John Muir Trail, named for a 20th-century conservationist, ends at this peak’s summit.

ANSWER: Mount Whitney

The John Muir Trail winds through this mountain range, passing through the Yosemite and Sequoia National Parks. Only a small portion of this range called the Carson Spur is found outside California.

ANSWER: Sierra Nevadas

(15) This form evolved from the ricercar [REE-cher-kar], and it is often contrasted with the simpler canon. For ten points each,

Name this contrapuntal style in which voices repeat and embellish on a central theme. In each set of *The Well-Tempered Clavier*, twenty-four pieces in this style are paired with twenty-four preludes.

ANSWER: fugue

This Baroque composer of *The Well-Tempered Clavier* showed his mastery of the fugue [fyoog] in an unfinished *Art of the Fugue*. He also wrote 6 *Brandenburg Concertos* and was the father of several notable composers.

ANSWER: Johann Sebastian Bach (prompt on “Bach”)

Some of Bach’s fugues, such as the *Little Fugue in G minor* and the *Tocatta and Fugue in D minor*, were written for this massive pipe instrument usually found in churches.

ANSWER: pipe organ

(16) The original form of this document listed 16 articles, which became condensed and contracted into 12 articles by its 1789 approval by Congress. For ten points each,

Name this document. Ten of its articles were ratified and applied to the US Constitution in 1791 as the first amendments.

ANSWER: Bill of Rights

This Founding Father was elected to the first Congress after pledging to introduce a Bill of Rights, which he drafted and presented to the House.

ANSWER: James Madison

The first two of the 12 original articles were not ratified by the states by 1791 and did not make it into the Constitution as part of the Bill of Rights. Article 1 provided formulas for calculating Congressional apportionment and is still technically pending before the states, and Article 2 concerned Congressional pay raises and ultimately became this amendment in 1992.

ANSWER: 27th Amendment to the US Constitution

(17) Answer the following about very different mythological weavers, for ten points each.

Name this Greek woman who foolishly challenged Athena to a weaving contest. Her pride was well-placed, as she easily bested the goddess, but she was turned into a spider nonetheless.

ANSWER: Arachne

In this country's folklore, the Jade Emperor prevented his daughter, the Goddess Weaver, from returning to Earth to meet her husband by creating the Milky Way. Later, he took pity on her and allowed her to see her husband on the seventh day of the lunar calendar.

ANSWER: China (accept Zhongguo)

The Egyptian goddess Neith wove the fabric of the world every day, but broke the mold of a peaceful weaver by also being a god of this type. In her role as a god of this type she produced weapons and guarded the bodies of dead warriors.

ANSWER: war

(18) For ten points each, give the following the 1840 Treaty of Waitangi [why-tahn-gee].

The treaty was written by British colonizers and purposefully mistranslated when described to leaders of this ethnic group, which didn't intend to give up all sovereignty to the British. Western contact with these people led to a period of infighting called the Musket Wars.

ANSWER: Maori people (prompt on, but do *not* otherwise reveal, answers related to "indigenous New Zealanders")

The Maori were forced to give up their land rights in what is now this country. Like the Aborigines in Australia to the west, the Maori people had been native to this country for centuries before Western contact.

ANSWER: New Zealand

The physical document of the Treaty of Waitangi is held in New Zealand's National Library in this capital city on the North Island.

ANSWER: Wellington

(19) In a novel by this author, a group of squirrels decide that Veruca is a bad nut and throw her down a trash chute in a candy factory. For ten points each,

Name this author of bizarre children's books like *Charlie and the Chocolate Factory*.

ANSWER: Roald Dahl

In this Roald Dahl novel, the title orphan flies away from his awful aunts in a huge piece of fruit, accompanied by a grasshopper, a centipede, a worm, a spider, a ladybug, and a silkworm.

ANSWER: James and the Giant Peach

In this other animal-themed book by Roald Dahl, the title character creates an underground society by stealing from farmers Boggis, Bunce, and Bean.

ANSWER: Fantastic Mr Fox

(20) Accurate dating of Stone Age artifacts is possible because this value is equal to 5,730 years for the carbon-14 isotope. For ten points each,

Identify this quantity, the average time needed for fifty percent of a radioactive sample to decay into a new element. This quantity is 4.5 billion years for uranium-238.

ANSWER: **half-life** (accept $t_{1/2}$)

Carbon-14 undergoes this type of radioactive decay, in which an electron is emitted while a neutron is converted into a proton.

ANSWER: **beta**-minus decay

One famous example of radioactive dating in archaeology involves this Italian relic of the Roman Catholic Church. It shows the face and body of a buried man believed by some to be Jesus, but radiocarbon tests only date this item to the fourteenth century.

ANSWER: **Shroud of Turin**