

Round 3

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Tossups

(1) **Varroa mites feed on these animals and can spread deformed wing virus to them. These animals may disappear, leaving behind ample food stores, in a process called colony collapse disorder. Karl von Frisch determined that these animals communicate food locations via (*) dancing. Male versions of this animal are only used for mating and do not assist female workers with gathering nectar or pollen. Habitat loss and the use of pesticides threaten, for ten points, what insects that produce honey?**

ANSWER: bees (accept additional information, like bumblebees, honey bees, worker bees, etc.; do not accept “queen bees”)

(2) **One of these construction projects required moving the temples of Abu Simbel. In 2017, the spillways at a 770 foot tall one of these projects named Oroville nearly failed, requiring evacuations along the Feather River. The baiji (*) dolphin went extinct in Hubei province after one of these projects, named Three Gorges, was built. For ten points, name this type of structure that generates hydroelectric power and holds back immense amounts of water.**

ANSWER: dams (prompt on descriptions of (hydroelectric) power plants, stations, etc. before “hydroelectric” is read)

(3) **In this country, Elizabeth McGovern portrayed Cora Crawley, who nearly dies of Spanish flu. In 2017, Jodie Whittaker became the first woman in this country’s history to play a previously male role after succeeding Peter Capaldi in a (*) “regeneration.” One of this country’s classic blue police boxes is used as a prop for the TARDIS, a time machine. *Downton Abbey* is set in, for ten points, what country where *Doctor Who* airs on the BBC?**

ANSWER: United Kingdom of Great Britain and Northern Ireland (accept UK; accept Great Britain; accept England)

(4) **In a story by this author, the title character refuses to do work with the reply “I would prefer not to.” This author of “Bartleby, the Scrivener” wrote about Captain Vere executing the title character for killing John Claggart in (*) *Billy Budd*. In another novel by this author, Ishmael survives the sinking of the *Pequod* after Queequeg, Starbuck, and Captain Ahab are killed by a white whale. For ten points, name this author of *Moby Dick*.**

ANSWER: Herman Melville

(5) **This artist impressed Georges Braque with a painting of five nude women with geometric faces reminiscent of African masks. This man painted *Boy with a Pipe* and an old man playing an instrument during his (*) Blue Period. This creator of *The Old Guitarist* and *Les Femmes d'Alger* [lay day-mwah-zels da-VEE-nyawn] was inspired by a bombing in the Spanish Civil War to create an enormous black and white painting of destruction. For ten points, name this painter of *Guernica* and co-founder of Cubism.**

ANSWER: Pablo Picasso (accept Pablo Diego José Francisco de Paula Juan Nepomuceno María de los Remedios Cipriano de la Santísima Trinidad Ruiz y Picasso)

(6) **In a voltaic [vol-TAY-ick] cell, a bridge named for this type of substance is responsible for maintaining charge balance. One of these substances can form a mineral called halite. Acid-base reactions produce (*) water and these compounds. Water that has a high concentration of these compounds is called brine and has high salinity. For ten points, name this type of solid compound formed by a cation and anion, a common example of which is sodium chloride, NaCl [spell it], used in cooking.**

ANSWER: salt (accept salt bridge; accept table salt)

(7) **The *Pretakhanda* section of the *Garuda Purana* recommends against performing this ritual for a child younger than three. This ritual is forbidden to Zoroastrians, since this action fills Atar with the impurities of a human body. In Hinduism, less than a day should elapse between (*) death and this process, after which relatives may take their loved one's remains to the river Ganges to scatter them. For ten points, name this process in which a person's body is reduced to ashes.**

ANSWER: cremation (accept word forms like cremating a body; accept descriptions like burning a body; prompt on descriptions of "disposing of a body" or "having a funeral;" do not accept or prompt on "burying a body")

(8) **In a collection in this language, subtitled for "Prince Galehaut," a man courts a widow by cooking his prized bird for her, and a nobleman pretends to kill his children to test his wife's faithfulness. In a collection of tales in this language, the characters (*) Fiametta and Dioneo contribute "Federigo's Falcon" and "The Patient Griselda" to the hundred stories told by themselves and their friends. For ten points, name this language of the *Decameron* by Boccaccio, in which ten young nobles flee from the Black Death in Florence.**

ANSWER: Italian (accept word forms like Italy; accept lingua italiana; do not accept "Roman")

(9) **A failed one of these events took place in Pennsylvania around "Fort Frick," which was reinforced by three hundred armed Pinkerton agents in 1892. In 1894, Grover Cleveland ended one of these events that began in (*) Pullman, a company town where Eugene V. Debs helped organize a boycott against the Pullman company's train cars. Labor unions seeking better conditions may organize, for ten points, what type of protest in which employees refuse to work?**

ANSWER: labor strike (accept Homestead strike; accept Pullman strike; prompt on descriptions of labor protests that don't use the word "strike;" prompt on "boycott" before it is read)

(10) **This ocean includes the Cocos or Keeling Islands. On another island in this ocean in 2018, John Allen Chau was killed while trying to serve as a missionary to the Sentinelese. This ocean includes the Gulf of (*) Khambhat and the Meghna River delta which are, respectively, part of the Arabian Sea and Bay of Bengal found on opposite sides of the country that shares its name with this ocean. For ten points, name this ocean between Africa and Australia.**

ANSWER: Indian Ocean

(11) **In a novel by this author, James Laurence receives a pair of slippers from his young neighbor and, in return, gives her a piano belonging to his deceased daughter. In another novel by this author, Nat Blake and Daisy and Demi Brooke learn from Professor (*) Bhaer at Plumfield School. In this author's most famous novel, Beth dies of scarlet fever while her sisters, Meg, Jo, and Amy March, come of age. *Jo's Boys* and *Little Men* are by, for ten points, what author of *Little Women*?**

ANSWER: Louisa May Alcott

(12) **In 1989, Fleischmann and Pons announced an experiment that achieved this process using heavy water and a palladium electrode at room temperature, although their claim to have made a “cold” version of this process was quickly debunked. The (*) proton-proton chain reaction, which produces helium, is the mechanism for this process in our Sun. For ten points, name this type of nuclear reaction that combines atoms into larger atoms, unlike the splitting seen in nuclear fission.**

ANSWER: nuclear fusion (accept cold fusion; prompt on “nuclear reaction” and similar general equivalents before “nuclear” is read)

(13) **This country and Germany signed the 1922 Treaty of Rapallo, which undid much of their earlier Treaty of Brest-Litovsk. This country annexed Bessarabia and Bukovina after it signed a 1939 pact named for von Ribbentrop and this country's foreign minister, (*) Molotov, which was broken after Operation Barbarossa, the massive 1941 Nazi invasion of this country. For ten points, name this communist country led during World War II by Joseph Stalin.**

ANSWER: Soviet Union (accept Union of Soviet Socialist Republics or USSR; accept Russian Soviet Federative Socialist Republic; prompt on “Russia”)

(14) **This type of instrument is used in Japan to perform taiko music. A goblet-shaped one of these instruments from West Africa is the djembe, and a pair of these instruments used in namesake Cuban music are (*) congas. The “kettle” types of these instruments can be tuned and are also known as timpani. Bass and snare are common varieties of, for ten points, what percussion instruments that are typically played by hitting a surface with sticks?**

ANSWER: drums (accept percussion instruments before it is read)

(15) According to the opening of a 1963 work, these people possessed “a strange stirring, a sense of dissatisfaction” and were unable to ask the “silent question” “Is this all?” The “problem that has no name” affected these people, who reported being profoundly (*) unhappy in a survey of Smith College graduates that inspired second-wave activist Betty Friedan. For ten points, name this type of person who was studied in Friedan’s *The Feminine Mystique*.

ANSWER: women (accept equivalents; accept elaborations, such as housewives, mothers, twentieth century American women, etc.)

(16) During this event, a series of “executive overflow” alarms were correctly ignored, as planned by software engineer Margaret Hamilton. West crater was one of the visual landmarks used during this event, whose success was met with the reply (*) “Tranquility, we copy you on the ground” from Houston’s Mission Control. For ten points, name this 1969 event in which the *Eagle* was piloted by Buzz Aldrin and commanded by Neil Armstrong.

ANSWER: Apollo 11 landing (accept descriptions of the first manned Moon landing; prompt on “moon landing”)

(17) When the Pierides [pee-AIR-ih-deez] lost a music contest to this group, they were turned into magpies. The members of this group resided on Mount Helicon, and the Hippocrene spring was sacred to them. (*) Orpheus was the son of one of these figures, who were the children of the Titan Mnemosyne [m’nih-mah-sih-nee] and Zeus. Calliope and Thalia represent epic poetry and comedy in, for ten points, what group of nine goddesses of the arts?

ANSWER: muses (accept mousai)

(18) This man stole a large cash prize from Rodrigo de Triana, who was actually the first crew member to see Guanahani. This man, who enslaved hundreds of Taino and Arawak people on Hispaniola and other islands, is (*) celebrated on a holiday replaced in many communities by Indigenous Peoples’ Day in October. For ten points, name this explorer whose three ships, the *Niña*, *Pinta*, and *Santa Maria*, sailed to the Americas in 1492.

ANSWER: Christopher Columbus (accept Cristobal Colon)

(19) At the end of this novel, Percival Wemys Madison forgets his name when confronted by a naval officer. In this novel, a “littlun” with a mulberry-colored birthmark dies in a forest fire started by an attempted (*) smoke signal. In this novel, Simon hallucinates that a pig’s head on a stick is the title demon, and is killed by a group that includes Ralph and Piggy. For ten points, name this novel in which boys stranded on a deserted island descend into savagery, written by William Golding.

ANSWER: Lord of the Flies

(20) The sum of the harmonic series, one over n , approaches this value. David Hilbert’s “Grand Hotel” features this many rooms, all occupied, and is still able to accommodate new guests in a famous (*) thought experiment. A “countable” type of this value is the size of the set of whole numbers. For ten points, give this value, the number of digits in the decimal expansion of pi, represented by a sideways eight.

ANSWER: infinity (accept word forms, like infinite)

Bonuses

(1) The most famous ruler of these people became known as the “Scourge of God” but was defeated at the Catalaunian Plains in 451 CE. For ten points each,

Name this ethnic group that traveled throughout eastern Europe in the fourth through sixth centuries CE.

ANSWER: Huns

The Hunnic army was highly dependent on cavalry archers, who were mounted on these animals.

ANSWER: horses

This king of the Huns invaded Gaul and Italy in the 450s CE and met with Pope Leo I, who convinced him not to sack Rome. He died on his wedding night in 453, supposedly of a bloody nose.

ANSWER: Attila the Hun

(2) In the early 1700s, French translator Antoine Galland published a twelve-volume translation of this work, though his translation included numerous mistranslations, additions, and omissions. For ten points each,

Name this work in which Scheherazade [sheh-hay-rah-zahd] prevents her execution by entertaining her king and husband, Shahryar, with a series of Middle Eastern folk tales, including the seven voyages of Sinbad the Sailor.

ANSWER: The Thousand and One Nights (accept One Thousand and One Nights; accept The Arabian Nights; accept The Thousand and One Arabian Nights or One Thousand and One Arabian Nights; accept The Arabian Nights’ Entertainments; accept Les milles et une nuits)

Galland added several stories by Syrian writer Hanna Diyab to his translation of the *Thousand and One Nights*, including one about this man, who marries the daughter of a sultan after coming into possession of an oil lamp that contains a genie.

ANSWER: Aladdin (accept Ala ud-Din; accept Aladdin and the Magic Lamp)

Galland also added the story of this man, who becomes rich by learning that the password “Open Sesame” can open a magic cave where forty thieves store their treasure.

ANSWER: Ali Baba (accept Ali Baba and the Forty Thieves)

(3) When subjected to this test, lithium produces pink colors while calcium produces orange. For ten points each,

Name this laboratory test, a procedure that is used to detect the presence of metal ions in a sample.

ANSWER: flame test (prompt on descriptions like “burning” or “fire”)

Sodium and iron both produce this color when subjected to a flame test. This is also the color of unburned elemental sulfur.

ANSWER: yellow

The flame test often employs this lab device, developed by a German chemist. This device adjusts air and gas flows to control its flame.

ANSWER: Bunsen burner (prompt on “burner”)

(4) According to this civilization's mythology, humans were created from maize dough after several attempts. For ten points each,

Name this civilization whose god Itzamma created their long-running calendar, and whose mythological origins are detailed in the *Popul Vuh*.

ANSWER: Maya (accept Mayan Empire)

This place, the Mayan underworld, has six houses in which visitors are tested and humiliated, including the Bat House, the Jaguar House, and the Razor House.

ANSWER: Xibalba [shee-BAL-bah]

In the *Popul Vuh*, the Hero Twins Hunahpu and Xbalanque [hoo-nah-POO and sh'ba-lahn-KAY] passed the tests of the Houses and defeated the lords of Xibalba in a ballgame match and then became these astronomical objects.

ANSWER: the sun and moon (both underlined parts required; accept in either order)

(5) Answer the following about computer malware, for ten points each.

Some malware is executed by users who are deceived into using a program or opening an e-mail attachment that appears useful. That kind of malware is known by this term, after a deceptive ancient Greek gift.

ANSWER: Trojan horse(s)

Trojan horse attacks may spread these malicious programs, which self-replicate by copying their code into other files on a computer. The name for this type of program was taken from the biological term for a non-living pathogen that infects living cells.

ANSWER: viruses

This type of malware is self-replicating like a virus, but unlike a virus transmits itself to other computers across a network. One of these programs, Stuxnet, was transmitted throughout computers in the Iranian nuclear program in a cyberattack roughly fifteen years ago.

ANSWER: worms

(6) Franz Liszt's "La Campanella" is one of many pieces of music adapted from this composer's works. For ten points each,

Name this composer of a famous set of twenty-four caprices, the last of which inspired Rachmaninoff's *Rhapsody on a Theme of* this composer. In his time, this Italian was far more famous as a virtuoso string player.

ANSWER: Niccolò Paganini

Paganini composed the twenty-four caprices and six concertos for this instrument. He was a master of this string instrument, which is smaller than a viola.

ANSWER: violin

Paganini also mastered this other stringed instrument, for which he composed fifteen quartets. This instrument is typically played with a pick, rather than a bow, and is not traditionally featured in the orchestra.

ANSWER: guitar (accept elaborations like acoustic guitar or classical guitar)

(7) Give the following about Barack and Michelle Obama's 2019 summer playlist, for ten points each.

The playlist featured the song "Go" from this duo's album *Let's Rock*. This indie duo's other albums include *El Camino*, *Turn Blue*, and *Brothers*.

ANSWER: The **Black Keys**

Camila Cabello sings "I love it when you call me" [the title name] in this song, a collaboration with Shawn Mendes.

ANSWER: **Señorita**

Unsurprisingly, this "song of the summer" by Lil Nas X is included. A remix of this song with Billy Ray Cyrus broke the record for longest time spent atop the Billboard Hot 100.

ANSWER: **Old Town Road**

(8) To protect itself from predators, this animal's skin turns white in the winter. For ten points each,

Name these small rodents whose habit of jumping off of cliffs during migration has led to the popular misconception that they commit mass suicide.

ANSWER: **lemmings**

Lemmings live in this biome, where permafrost and low temperatures inhibit most tree growth. This biome is colder than the taiga.

ANSWER: **tundra**

Lemmings forage for grass, moss, and this symbiotic tundra organism, a combination of algae and fungi.

ANSWER: **lichen**

(9) This author wrote romance novels under the pen name Mary Westmacott, but is better known for novels featuring characters like Tommy and Tuppence, a married pair of detectives-turned-spies. For ten points each,

Name this English Queen of Crime, who wrote the long-running play *The Mousetrap* and a series of novels about the Belgian detective Hercule Poirot [ayr-KYOOOL pwah-ROH].

ANSWER: Agatha **Christie** (accept Dame Agatha Mary Clarissa Miller **Christie**, DBE; accept Agatha, Lady **Mallowan**)

In a novel largely set on this train, Poirot [pwah-ROH] solves the murder of the American Samuel Ratchett while traveling from Istanbul to Paris.

ANSWER: Murder on the **Orient Express**

In addition to Poirot and Tommy and Tuppence, Agatha Christie frequently wrote about this English detective, a spinster resident of Saint Mary Mead who depends on her many years of human observation to solve crimes.

ANSWER: Miss Jane **Marple**

(10) This woman captured Confederate property and helped free hundreds of slaves in an 1863 raid along the Combahee River. For ten points each,

Name this abolitionist who escaped from slavery in 1849, then earned the nickname “Moses” by making over a dozen journeys to rescue family and friends.

ANSWER: Harriet Tubman (accept Araminta Ross)

Harriet Tubman was one of the most successful “conductors” of this secret system that transported escaping slaves to freedom in the North.

ANSWER: Underground Railroad

Tubman’s journeys became more dangerous in 1850 with the passage of this law, which required people in free states to assist in returning escaped slaves to the South.

ANSWER: Fugitive Slave Act of 1850 (prompt on “Bloodhound Bill”)

(11) A peaceful protest in this city in 2014 was named for the umbrellas that students used to avoid pepper spray. For ten points each,

Name this Special Administrative Region where protestors recently took over an international airport over political disputes with their Communist rulers.

ANSWER: Hong Kong

Hong Kong is governed under this country’s “One Country, Two Systems” policy, created in the 1980s by leader Deng Xiaoping [dung shaow-ping].

ANSWER: People’s Republic of China

Protestors in Hong Kong were recently warned not to cross the “red line” of undermining Chinese sovereignty by this current president of China.

ANSWER: Xi Jinping [shee]

(12) Great Britain was initially approached to take part in this event but declined, and the US delayed their part in this event until after the Civil War. For ten points each,

Name this transaction that was agreed to on March 30th, 1867, in which the United States acquired over four hundred million acres of land from Russia for seven point two million dollars.

ANSWER: purchase of Alaska (accept descriptive equivalents involving buying Alaska)

This Secretary of State negotiated the purchase of Alaska, which was controversial due to the seeming lack of resources in Alaska at the time; as such, the deal became known as this man’s “Folly.”

ANSWER: William Henry Seward (accept Seward’s Folly)

The purchase proved wise relatively quickly, as Alaska became the site of several of these economic booms. An 1848 one of these events started at Sutter’s Mill and caused a boom in California’s population.

ANSWER: gold rushes

(13) In this novel, Cardinal Richelieu wants to start a war between Britain and France. For ten points each,

Name this novel by Alexandre Dumas about a title group of soldiers composed of Athos, Porthos, and Aramis.

ANSWER: The Three Musketeers (accept Les Trois Mousquetaires)

This man, a friend of the musketeers, is the novel's protagonist. Milady de Winter tries to kill this man after he finds a fleur-de-lis [floo-rduh-lee] branded on her shoulder.

ANSWER: d'Artagnan [dar-tan-yan]

Dumas continued the story of the three musketeers after the end of the original novel. In this work, originally the third section of the long novel *The Vicomte of Bragelonne*, the musketeers and d'Artagnan help the title twin of Louis XIV ["fourteenth"], who is imprisoned and forced to conceal his identity.

ANSWER: The Man in the Iron Mask (accept L'Homme au Masque de Fer; accept Philippe)

(14) This theory includes a set of ten field equations, named for their developer, that explain the geometry of gravitation and the curvature of spacetime. For ten points each,

Name this theory of physics. It was published in 1915, a decade after a related theory described as "special."

ANSWER: theory of general relativity (accept GR; prompt on "relativity" or "theory of relativity;" prompt on, but do not otherwise reveal, "Einstein's theory of relativity;" do not accept or prompt on "special relativity;" do not accept or prompt on "general theory of relativity")

This German scientist developed the theories of special and general relativity. One consequence of special relativity is the equivalence of mass and energy, which this scientist discovered followed the equation " E equals mc^2 ."

ANSWER: Albert Einstein

One of the possible solutions of the Einstein field equations predicts this type of structure, which is also called an Einstein-Rosen bridge. These hypothetical "shortcuts" in spacetime have inspired countless science-fiction writers.

ANSWER: wormholes

(15) In Catholic tradition, Saint Peter was the first Bishop of Rome and, therefore, was the first person to hold this position. For ten points each,

Name this religious office, the head of the Catholic church.

ANSWER: Pope (accept word forms like papacy; accept papa; do not accept or prompt on "bishop")

While trying to spread the influence of Christianity, Peter worked closely with this letter-writer, the author of epistles to groups like the Romans and Corinthians.

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

Paul also did missionary work with other early Christians. On one journey, he and Silas were imprisoned in Philippi, but were freed by an act of God in the form of this event.

ANSWER: earthquake

(16) French, German, Italian, and Romansh are all national languages in this country, although Romansh is not considered official. For ten points each,

Name this central European country known for its neutrality.

ANSWER: Switzerland (accept Swiss Confederation)

While Zurich and Geneva are Switzerland's two largest cities, this city was declared the Federal City, or capital, in 1848.

ANSWER: Bern

Switzerland is divided into twenty-six of these federal regions, including Bern, Uri, and Schwyz. These regions are somewhat analogous to states, and each has its own constitution.

ANSWER: cantons

(17) This artist depicted Ruby Bridges walking to school against a wall covered with hate speech and splattered tomatoes in his painting *The Problem We All Live With*. For ten points each,

Name this artist known for his depictions of American life, who included scenes of a Thanksgiving dinner and a man standing to speak in his *Four Freedoms* series.

ANSWER: Norman Rockwell (accept Norman Percevel Rockwell)

Rockwell painted *The Problem We All Live With* for the centerfold of *Look*, a publication of this type. Earlier in his career, he illustrated less political covers for another of these publications, the *Saturday Evening Post*.

ANSWER: magazines

For a Memorial Day cover of *The Saturday Evening Post*, Rockwell took inspiration from a classic wartime poster to paint this World War II icon of the female working force.

ANSWER: Rosie the Riveter

(18) This woman won the 1991 Nobel Peace Prize but could not accept it in person, as the ruling military junta held her under house arrest. For ten points each,

Name this activist and politician who became State Counsellor of her country in 2016. Since her rise to power, she has been heavily criticized for her inaction against the persecution of the Rohingya people.

ANSWER: Aung San Suu Kyi ([ong sahn soo chee], but be lenient) (prompt on "Suu" or "Kyi" alone)

Aung San Suu Kyi is the leader of this Southeast Asian country. This majority-Buddhist country commonly goes by either of two names, since the military government controversially changed the name in 1989.

ANSWER: Republic of the Union of Myanmar (accept Burma)

The majority of the persecuted Rohingya ethnic group follow this religion. Many Rohingya refugees have fled to Bangladesh, where ninety percent of the country follows this religion.

ANSWER: Islam (accept word forms like Islamic; accept Muslims)

(19) Aristotle made an important early contribution to this field when he realized that whales are not fish. For ten points each,

Name this science of classification that arranges organisms into groups like orders and families. This system owes its modern form to Carolus Linnaeus.

ANSWER: **taxonomy** (accept word forms like **taxonomic** classification)

The Whittaker system of taxonomy uses five of these large groups, including animal, plant, and fungi, that are bigger than a phylum.

ANSWER: **kingdoms**

Though it has largely been replaced by the domain system, this one of the five kingdoms included all single-celled prokaryotes such as bacteria and archaea.

ANSWER: **Monera** (accept **monerans**)

(20) Nathaniel Hawthorne, the author of the novel *The House of the Seven Gables* and the short story collection *Twice Told Tales*, set many of his works in colonial New England. For ten points each,

Name this Hawthorne novel set in Puritan Boston, in which Hester Prynne is forced to wear the title mark, a red “A,” on her clothes as evidence of her adultery.

ANSWER: The **Scarlet Letter**

Hester Prynne is forced to wear the scarlet letter because she has an affair with Arthur Dimmesdale, a Puritan man with this job. In a story from *Twice Told Tales*, a man with this job wears a title “Black Veil” to conceal his face, likely due to a “secret sin” hinted at in a sermon.

ANSWER: **reverend** (accept **minister**; accept **clergyman**; accept **Reverend** Arthur **Dimmesdale**; accept The **Minister’s Black Veil**; accept **Reverend** Mr **Hooper**; accept **Father Hooper**)

In this short story from *Twice Told Tales*, the title Puritan man follows his wife, Faith, to a witches’ sabbath in the forest.

ANSWER: **Young Goodman Brown**