

Round 2

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Tossups

(1) **A 19th century literary club in Toronto was dedicated to the rights of these people. Several hundred of these people were given expenses-paid travel by Louis XIV to Quebec, Trois-Rivières, and Montreal in New France. Justin Trudeau remarked “Because it’s (*) 2015” when asked why these people made up half of his Cabinet. The *filles du roi* [fee dure-wah] were, for ten points, what group of people who earned the right to vote thanks to suffragists like Emily Stowe?**

ANSWER: women (accept filles du roi or King’s Daughters before it is read; accept any additional information relating to Canadian women)

(2) **This language was used for a novel in which the decomposition of Zosima’s body disappoints one of the three title siblings. Another novel in this language follows the consequences of the murders of the (*) pawnbroker Alyona and her sister, Lizaveta, by a student named Raskolnikov. For ten points, name this language used to write Fyodor Dostoyevsky’s novels *The Brothers Karamazov* and *Crime and Punishment*, which begins in Saint Petersburg.**

ANSWER: Russian language (accept Russia; accept rússkiy yazýk; accept Rossiya)

(3) **This mathematical operation is performed in Flash Anzan, a numbers game whose world record is less than two seconds. When two polynomials are multiplied together, this operation is performed to find the degree of the result. A capital (*) sigma is used in simplified notation for this mathematical operation, which in a mixed number is implied between the whole number and the fraction. For ten points, name this operation, the inverse of subtraction.**

ANSWER: addition (accept summation; accept plus; accept word forms like adding)

(4) **Particles emitted by the eruption of Krakatoa inspired this painting’s warm, monochromatic background. In the background of this painting, shadowy boat masts float on the swirling blue and yellow water of (*) Oslo Harbor. Two dark figures walk together on the far left side of this painting, next to a railing and behind a tortured central figure. For ten points, name this painting by Norwegian artist Edvard Munch, in which a bald figure raises its hands to its head and opens its mouth wide.**

ANSWER: The Scream (accept Skrik; accept Der Schrei der Natur)

(5) **This writer noted that “Tyranny, like Hell, is not easily conquered” in the opening paragraph of a work that opens “These are the times that try men’s souls.” This author of *The Crisis* wrote an “Investigation of True and Fabulous Theology” that advocated (*) deism, as well as a 1776 work that argued for independence from Britain. For ten points, name this early American pamphleteer who wrote *The Age of Reason* and *Common Sense*.**

ANSWER: Thomas Paine

(6) **When seen through an H-alpha filter, the Sun appears this color. The more silicate a meteorite contains, the more it glows this color while falling. The most common stars in the Milky Way are (*) dwarfs of this color, and the expansion of the universe is evidenced by this color shift. In five billion years, the Sun will become a giant with this color that also characterizes Jupiter’s Great Spot. For ten points, name this color observed during a total lunar eclipse when a “blood moon” is seen.**

ANSWER: red

(7) **After this god tried to woo the nymph Minthe, she was turned into a mint plant. This god owned the Helm of Darkness, which Perseus used to escape from the Gorgons. Pirithous [PIH-rih-thus] tried to kidnap this god’s wife, whom this god had earlier tricked into eating (*) pomegranate seeds, thus forcing her to be his bride. For ten points, name this husband of Persephone [Per-seh-fuh-nee] and brother of Zeus and Poseidon, the Greek god of wealth and the underworld.**

ANSWER: Hades (Do not accept or prompt on Pluto)

(8) **This man was betrayed by James Wilkinson in their attempt to invade Mexico and form a new country in 1806. The Essex Junto tried to get this man elected Governor of New York in 1804, after he was dropped as (*) Vice President by Thomas Jefferson; shortly after losing that election, this man became a fugitive for shooting a man at Weehawken, New Jersey. For ten points, name this politician who dueled and killed Alexander Hamilton.**

ANSWER: Aaron Burr

(9) **Ketones are produced from this kind of compound in the Jones oxidation, and combining one of these with a carboxylic acid makes an ester. The (*) isopropyl type of these compounds is found in hand sanitizer. These compounds contain at least one OH [O-H] group, and one common example is a product of yeast fermentation that must be detoxified in the liver. For ten points, name this group of organic compounds with “grain” and “rubbing” types.**

ANSWER: alcohols

(10) **Characters in this novel form a Charles Dickens-inspired Pickwick Club and re-enact John Bunyan’s *Pilgrim’s Progress*. In this novel, Aunt Carrol and Florence invite a young artist to Europe, where she falls in love with her childhood friend, (*) “Laurie” Laurence. Professor Bhaer [“bear”] marries the aspiring writer, Jo, after her sister dies of scarlet fever in this novel about Marmie’s children. Meg, Jo, Beth, and Amy are the title March sisters in, for ten points, what novel by Louisa May Alcott?**

ANSWER: Little Women

(11) **In this game, failing to kill a Chaos Bug leads a friendly knight from Astoria to attack the player. The Kings of New Londo are corrupted by Kaathe, one of two opposing primordial serpents in this game who attempt to influence the player's ending choice. At the end of this game, players defeat (*) Gwyn, Lord of Cinder and decide whether or not to rekindle the first flame. For ten points, name this recently remastered game by FromSoftware, an RPG known for its difficulty.**

ANSWER: Dark Souls (accept Dark Souls: Prepare to Die Edition; accept Dark Souls: Remastered)

(12) **This ship won the Blue Riband in October 1907 by reaching New Jersey in just under five days. Travelers on this ship were warned that a “state of war exists” by a newspaper ad placed by the Imperial (*) German Embassy. The coast of the Old Head of Kinsale was the site of this ship's sinking after a German U-boat torpedoed it in 1915, killing nearly 1,200 people. For ten points, name this ocean liner whose sinking helped push the US into World War I.**

ANSWER: RMS Lusitania

(13) **Thévenin's theorem allows analysis of these entities to be simplified, and the LC type of them can generate signals of specific frequency. A GFI is a safety switch that will interrupt one of these entities. The sum of potential differences around a (*) closed one of these must be zero according to Kirchhoff's loop rule. Resistors appear as zigzag lines on diagrams of these entities, whose voltage and current are related by Ohm's law. For ten points, name these networks of batteries, wires, and other components that may be arranged in series or parallel.**

ANSWER: electrical circuits

(14) **In this novel, a page of Dick Johnson's Bible is removed to create the same kind of warning that had earlier been delivered to the Admiral Benbow Inn. Doctor Livesey bribes Ben Gunn with cheese in this novel, and (*) Squire Trelawney arranges an expedition to follow a map discovered in the belongings of Billy Bones. Jim Hawkins adventures on a ship with the pirate Long John Silver in, for ten points, what novel by Robert Louis Stevenson?**

ANSWER: Treasure Island, or the mutiny of the Hispaniola

(15) **A performer in this vocal range sings in falsetto in “Olim lacus colueram,” their only solo in *Carmina Burana*. The clef for this vocal range puts C on the fourth line of the staff and is used by cellos, bassoons, and trombones. (*) Three famous performers of this vocal range included Plácido Domingo and Luciano Pavarotti. This range appears between alto and bass in a standard choir. For ten points, name this highest male vocal range.**

ANSWER: tenor

(16) **Public art in this city includes a 24-foot-long arm and fist that was built as a memorial to boxer Joe Louis. This city is home to a set of Diego Rivera murals depicting industrial workers building bombs and cars. This city owns Belle Isle Park, a river island between this city and (*) Ontario. Thomas Edison's last breath is held in the suburb of Dearborn at the Henry Ford Museum just outside, for ten points, what largest city in Michigan?**

ANSWER: Detroit

(17) A character created by this author accuses Marjorie of “[knowing] everything,” and watches his father perform a C-section in the stories “The End of Something” and “Indian Camp,” two stories about Nick Adams. This author of *In Our Time* wrote about Catherine (*) Barkley and Frederic Henry in a novel about World War I, and about Jake Barnes and Lady Brett Ashley living in Spain as part of the Lost Generation. For ten points, name this author of *A Farewell to Arms* and *The Sun Also Rises*.

ANSWER: Ernest Miller Hemingway

(18) Some items used during this holiday may depict Judith holding Holofernes’ head, even though this holiday celebrates Antiochus [an-TYE-oh-kuss] being defeated by the (*) Maccabees. Sufganiyot, a type of jelly doughnut, are eaten on this holiday, as are latkes and other foods fried in oil. The miracle of a small amount of sacred oil lasting for eight days is celebrated in, for ten points, what Jewish Festival of Lights that is celebrated in December?

ANSWER: Chanukah

(19) Zinc finger motifs bind to this shape’s major groove. Topo-iso-merase breaks this shape to relieve super-coiling stress, and its B and Z examples show opposite twist. “Photograph 51,” taken by (*) Rosalind Franklin, contributed to the discovery of this shape that is formed by hydrogen bonds between purine and pyrimidine bases. For ten points, name this shape discovered by Watson and Crick, the twisted ladder structure of DNA.

ANSWER: double helix (prompt on “DNA”)

(20) This battle’s winning side lost the generals Stesilaos [tess-ih-lay-os] and Callimachus in the fighting. The Carneia festival prevented some troops from helping in this battle, so Miltiades [mill-tie-uh-deez] devised the winning strategy in this battle without (*) Spartan help. Darius the Great was repelled from Greece in, for ten points, what ancient battle, after which news was relayed to Athens 26 miles away by a runner?

ANSWER: Battle of Marathon

Bonuses

(1) For ten points each, give the following about the 1449 Tumu **[tuh-MU]** Crisis.

The Tumu Crisis was a horribly mismanaged military effort by this dynasty, whose Zhengtong Emperor got himself captured by ignoring multiple opportunities to return to Beijing. This dynasty built the Forbidden City and is famous for its porcelain art.

ANSWER: **Ming** Dynasty

The crisis involved a raid of 20,000 of these people, led by Esen Taishi, into Ming territory where they destroyed an unprepared army of half a million Ming soldiers. These people ruled the Yuan Dynasty, which was defeated by the Ming.

ANSWER: **Mongols** (accept **Oirats**)

The Ming Dynasty responded to the Tumu Crisis by renewing its efforts to maintain this defensive structure, which was supposed to keep the Mongols out. Contrary to legend, you cannot see this structure from space.

ANSWER: **Great Wall** of China

(2) This event ended the time of the Nephilim, a race of giants. For ten points each,

Name this biblical event, whose end was revealed by a dove carrying an olive branch.

ANSWER: the great **flood** (accept **deluge**)

This man built a three-hundred-cubit-long ark and filled it with seven pairs of each clean animal and two of each unclean animal to repopulate the world after the flood.

ANSWER: **Noah** (accept **Nuh**)

The descendants of this son of Noah were cursed after this man failed to cover Noah while he was naked and drunk after the flood. This man was the father of Canaan and the brother of Shem and Japheth.

ANSWER: **Ham**

(3) This branch of physics can be used to predict where a ski jumper will land once she leaves the ramp. For ten points each,

Identify this field that studies the two-dimensional motion of a projectile only traveling under the influence of gravity. The paths of a thrown baseball or a bullet leaving the barrel of a gun are subjects for this field.

ANSWER: **ballistics**

Assuming zero air resistance, a projectile will achieve maximum range when it is launched at this degree angle of elevation.

ANSWER: **45** degrees (accept **pi over 4 radians** or **one-fourth pi radians**)

This Italian scientist was the first to determine that the path of a projectile is a parabola. He also rolled balls down ramps and supposedly dropped them off the Leaning Tower of Pisa to demonstrate the uniform acceleration of falling bodies.

ANSWER: **Galileo** Galilei

(4) This politician lied about the extent of his war service, turning his original nickname of “Tail Gunner Joe” into a mockery used by some of his opponents. For ten points each,

Name this senator whose reckless pursuit of Communists within the US government during the Red Scare led to his condemnation by the Senate.

ANSWER: Joseph “Joe” McCarthy

Joe McCarthy represented this US state in the Senate until his 1957 death from alcoholism. This state’s junior senator, Tammy Baldwin, previously represented its capital city of Madison in the House.

ANSWER: Wisconsin

McCarthy’s crusade against communist influence was sparked with his 1950 speech in West Virginia, in which he claimed to hold a list of 205 names of Communists in this governmental department.

ANSWER: State Department

(5) 10 years after the creation of the Marvel Cinematic Universe, there is significantly less focus on men in tights. For ten points each,

Marvel’s first solo female superhero film will be 2019’s *Captain Marvel*, starring this actress who won an Oscar for her role in *Room*.

ANSWER: Brie Larson (accept Brianna Sidonie Desaulniers)

While the role of this superhero defender of Wakanda has been held by T’Challa, many fans speculate that in the aftermath of *Avengers: Infinity War*, Shuri will take up this mantle. In the comics, Shuri becomes this superhero after taking the title of queen and consuming the heart-shaped herb.

ANSWER: Black Panther

Infinity War did not have a happy ending for this adopted daughter of Thanos, who was thrown off a cliff as part of the sacrifice needed to claim the soul stone.

ANSWER: Gamora Zen Whoberi Ben Titan

(6) In this short story collection, Dioneo tells the story of “The Patient Griselda,” and Fiametta tells the story of “Federigo’s Falcon.” For ten points each,

Name this collection of stories by Giovanni Boccaccio in which three young men and seven young women retreat to the countryside outside Florence and tell ten stories a night for ten days.

ANSWER: The Decameron (accept Il Decamerone)

The young Florentines in *The Decameron* move to the country to avoid this catastrophic illness that swept across Europe in the 1340s and -50s, and which was nicknamed for the dark color of gangrenous skin in infected people.

ANSWER: Black Death (accept Black Plague; accept Bubonic Plague; accept the Plague)

Though Boccaccio is best-known for *The Decameron*, much of his career was devoted to writing these fourteen-line poems in the “Petrarchan” style.

ANSWER: Petrarchan sonnet (accept Italian sonnet)

(7) This composer depicted the various personalities of his friends in his *Enigma Variations*. For ten points each, Name this British composer who is better known for a series of marches written for the coronation of Edward VIII, *Pomp and Circumstance*.

ANSWER: Sir Edward Elgar

In America, *Pomp and Circumstance*'s first march is commonly performed at these ceremonies, both at the high school and college level.

ANSWER: graduation ceremonies

Elgar's last major work was an E minor concerto for this large string instrument. Famous performers of this instrument include Pablo Casals and Jacqueline du Pré.

ANSWER: cello (accept violoncello)

(8) At the height of the Roman Empire, two rivers formed the border of much of the Roman frontier in Europe. For ten points each,

The border began at this river's mouth on the North Sea in the Netherlands. Today, this river forms much of the Franco-German border.

ANSWER: Rhine River

East of the Rhine, the Roman frontier often extended to this river, the second longest in Europe after the Volga. Four national capitals lie on this river, which empties into the Black Sea.

ANSWER: Danube River

The Roman Empire's expansion into the Middle East reached this river, where they agreed on a short-lived border with the Parthian Empire. The ancient Mesopotamian culture flourished between this river and the Tigris River.

ANSWER: Euphrates [yoo-fray-tees] River

(9) Henry Fleming and Jim Conklin discuss whether they would desert their regiment in this novel. For ten points each,

Name this novel in which Henry wants the title mark to prove that he is not a coward.

ANSWER: The Red Badge of Courage

The Red Badge of Courage was written by this American author of "The Bride Comes to Yellow Sky" and *Maggie: A Girl of the Streets*.

ANSWER: Stephen Crane

The Red Badge of Courage is set during this war. In "An Occurrence at Owl Creek Bridge," another story set during this war, Peyton Farquhar is executed by Union troops for his support of the Confederacy.

ANSWER: American Civil War

(10) Homeostasis and adaptation are among the characteristics shared by all living things. Answer these questions about other common traits of life, for ten points each.

Life requires that existing organisms give rise to offspring through this process, which can be sexual or asexual. Spores and seeds are common ways of achieving this among non-animals.

ANSWER: **reproduction**

The energy needed for reproduction and other functions must be obtained by organisms through this process, the complete set of chemical reactions that occur inside a cell.

ANSWER: **metabolism**

Because they are non-cellular and lack the ability to reproduce on their own, these disease-causing agents are often not grouped with living organisms. Phages are examples of these that infect bacteria.

ANSWER: **viruses**

(11) Answer the following about divisibility by prime numbers, for ten points each.

A number is divisible by this non-prime, single digit number if and only if it's divisible by both 2 and 3.

ANSWER: **six**

The computational difficulty in finding the divisors of large semiprime numbers - for example, a product of just two prime numbers with hundreds of digits - explains why the RSA algorithm for this process is hard for hackers to beat.

ANSWER: **cryptology** (accept **encryption**; accept **decryption**; accept word forms)

Using this procedure, if a number is crossed out 5 times, it is divisible by five different prime numbers. This "sieve" [**sivv**], which is named for a Greek mathematician, will leave the prime numbers uncrossed.

ANSWER: Sieve of **Eratosthenes**

(12) The first holder of this position, a man named Augustine, led the successful Gregorian mission to convert the Anglo-Saxons in 596. For ten points each,

Name this religious position, the most senior clergyman in the Church of England.

ANSWER: **Archbishop of Canterbury** (prompt on "Primate of All England")

The Archbishop of Canterbury became a Protestant position after this English king broke away from the Catholic Church in 1534 out of anger that the Pope wouldn't annul his marriage to Catherine of Aragon.

ANSWER: **Henry VIII** [**the eighth**] (prompt on "Henry")

According to legend, this king inadvertently ordered the murder of Thomas Becket, Archbishop of Canterbury, in 1170 when he muttered "Will no one rid me of this meddlesome priest?" in front of four of his knights.

ANSWER: **Henry II** [**the second**] (prompt on "Henry")

(13) Answer the following about depictions of couples in art, for ten points each.

A man holding a pitchfork and a woman wearing an apron stand in front of a white house with a strangely ornate window in this Grant Wood painting.

ANSWER: American Gothic

This artist's many self-portraits included one in which she wears a red shawl and stands under a dove, holding hands with her husband, fellow painter Diego Rivera.

ANSWER: Frida Kahlo de Rivera

Art historian Erwin Panofsky has theorized that this Dutch portrait of a merchant and his wife acted as a legal marriage document. The couple in this painting stand over a pair of wooden clogs and a small black dog that represents fidelity.

ANSWER: The Arnolfini Portrait (accept Giovanni Arnolfini and His Bride; accept any answer that includes the name Arnolfini and the suggestion of a marriage, such as The Arnolfini Marriage or The Arnolfini Wedding)

(14) This type of fossilization occurred 225 million years ago in Arizona, leaving behind an entire forest's worth of preserved logs. For ten points each,

Name the fossil-making process in which buried plants and animals become filled with mineral-rich water that eventually replaces all tissue with hard crystals.

ANSWER: petrification (accept petrification or permineralization)

One of the most complete petrified dinosaur skeletons ever found is the Chicago Field Museum's Sue, a member of this carnivorous species. This small-armed predator dominated North America at the end of the Cretaceous Period.

ANSWER: Tyrannosaurus rex (accept T. rex)

An "explosion" of life during the Cambrian Period is recorded in this geologic formation in British Columbia. This petrified fossil deposit has yielded many trilobite species and the bizarre predator *Anomalocaris*.

ANSWER: Burgess Shale

(15) This author's pen name is likely derived from her father's position in the Shikibu-sho [shee-kee-boo-shoh], the Ministry of Rites in Heian-Era [hay-on era] Japan. For ten points each,

Name this early Japanese author, who wrote about a "shining prince" in her most famous work.

ANSWER: Murasaki Shikibu (accept Lady Murasaki; accept Fujiwara)

Murasaki Shikibu's [moo-rah-sah-kee shee-kee-boo's] "shining prince" is the title hero of this work of fiction, in which he falls in love with Lady Fujitsubo, Lady Murasaki, and Lady Aoi before he "vanishes into the clouds."

ANSWER: The Tale of Genji (accept Genji Monogatari)

The Tale of Genji is often considered among the first examples of this type of work. This term describes a long work of fiction written in prose rather than poetry.

ANSWER: novel

(16) This thinker described his past Manichean [man-ih-kee-un] faith, his son born out of wedlock, and his conversion to Catholicism are detailed in a 13-book autobiography. For ten points each,

Name this Christian theologian of the 4th and 5th centuries CE who lived in the north African city of Hippo.

ANSWER: Saint Augustine of Hippo

Augustine's autobiography of the sins of his youth is named for this act of admitting one's sin.

ANSWER: confession (accept word forms; accept Confessions)

Augustine's work *City of God* includes early thoughts on the justness of this action, noting that it should never be performed pre-emptively and that, if this large-scale action is taken in defense, it does not violate a commandment.

ANSWER: war (accept Just War theory; prompt on answers describing "killing," "murder," "violence," "fighting," etc)

(17) This year's Presidential election was won by the National Union Party, an adopted name used by Republicans who wanted to attract War Democrats and other pro-Union forces who wouldn't otherwise vote for Abraham Lincoln. For ten points each,

Name this year, in which Lincoln won re-election. The following year, the Civil War ended and Lincoln was assassinated.

ANSWER: 1864 (prompt on "64")

In the 1864 election, Lincoln was opposed by this Democratic candidate, a Union general who Lincoln had fired in 1862 after he failed to crush Robert E. Lee at Antietam.

ANSWER: George McClellan

Officially, this 17th U.S. President represented the National Union Party in the White House when he took power following Lincoln's death. The party disappeared after this man left office in 1869, having survived his impeachment trial.

ANSWER: Andrew Johnson (prompt on Johnson)

(18) Molecules such as vitamin E and beta-carotene that scavenge these chemicals in the body are called antioxidants. For ten points each,

Give this term for molecules or ions with an unpaired electron in the outer shell. These species are highly reactive, like the ones formed by chloro-fluoro-carbons that break down the ozone layer.

ANSWER: free radicals

One major source of free radicals in cells is this compound with formula H_2O_2 [H-two-O-two]. This compound is decomposed by the enzyme catalase and is sold in brown bottles for use as a disinfectant.

ANSWER: hydrogen peroxide (accept peroxide)

Cumulative damage to DNA and cell membranes is behind the free radical theory of this process that typically ends with death. A diet full of antioxidant-rich fruits and vegetables has not been conclusively shown to slow this process.

ANSWER: aging (accept senescence)

(19) In a novel by this author, a quick-spreading “red weed” spreads through the ruins of English cities after a mysterious colonizing force destroys human society with a Heat-Ray. For ten points each,

Name this English science fiction author, who also wrote *The Island of Doctor Moreau*.

ANSWER: Herbert George “H.G.” Wells

Red weed is used to create a Mars-like environment as humans are harvested for food in this H.G. Wells novel about a Martian invasion of Earth.

ANSWER: The War of the Worlds

Because they lack digestive organs, Martians in *The War of the Worlds* consume this part of the human body with the help of a “little pipette” designed for the purpose.

ANSWER: blood

(20) This god stepped down as sun after murdering all of his followers with massive hurricanes. For ten points each,

Name this “feathered serpent” whose followers were changed into monkeys by Tezcatlipoca [tetz-kaht-lee-poh-kah]. As a result, this god traveled to Mictlan to create mankind for the fifth age.

ANSWER: Quetzalcoatl [keht-zall-koh-ah-tull]

Quetzalcoatl [keht-zall-koh-ah-tull] created humans by mixing his blood with these items. These items were the remains of the people of fourth age.

ANSWER: bones

Quetzalcoatl and Tezcatlipoca are prominent members of the mythology of this Mesoamerican civilization. This civilization’s mythology also included Huitzilopotchli [h-weet-zill-oh-pot-kee], the patron of the Mexica tribe.

ANSWER: Aztec