

Round 1

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Tossups

(1) **In a novel by this author, Hank Morgan takes over Merlin’s position through time travel. This author of *A Connecticut Yankee in King Arthur’s Court* wrote a novel in which the deceitful Duke and Dauphin try to trick a boy who travels with Jim down the (*) Mississippi River. For ten points, name this American author of *Huckleberry Finn* and *Tom Sawyer*.**

ANSWER: Mark Twain (accept Samuel Langhorne Clemens)

(2) **This force is related to an accelerating observer by the Equivalence Principle of general relativity. Spacecraft can speed up by using this force as a “slingshot.” Galileo used two balls of different (*) masses to demonstrate that the pull of this force is constant, causing acceleration of 9.8 meters per second squared. For ten points, name this force that pulls objects toward large masses like the Earth.**

ANSWER: gravity (accept gravitational force)

(3) **Martin Bormann was the private secretary of this political party’s leader. Paramilitary wings of this party included the SS and SA, and this party’s propaganda was organized by Joseph Goebbels. The Beer Hall Putsch in (*) Munich in 1923 tried to bring this party to power, and it ruled its country from 1933 to 1945. For ten points, name this socialist political party that ruled the Third Reich of Germany under Adolf Hitler.**

ANSWER: Nazi Party (accept National Socialist German Workers’ Party or NS(DA)P; accept Nazi Germany; accept Adolf Hitler before “this political party” is read; do not accept “Socialists” alone; do not accept “Fascists”)

(4) **In a work in this genre, produced by Sergei Diaghilev, Prince Ivan spares the life of the title *Firebird*. Another work in this genre traditionally includes thirty-two fouettés [foo-eh-TAYZ] performed by a woman who plays both Odile and (*) Odette, residents of the title *Swan Lake*. Jetés [zheh-TAYZ] and pliés [plee-AYZ] are choreographed steps in, for ten points, what form of artistic dance?**

ANSWER: ballets

(5) **A group of texts found in these buildings at Saqqara describe a king hunting and eating the gods. Graduating sizes of mastabas were used by Imhotep to create Djoser’s (*) “stepped” one of these buildings, and three of these structures belonging to Menkaure, Khafre, and Khufu were built near Giza. For ten points, name these enormous structures used to bury Egyptian Pharaohs.**

ANSWER: Egyptian pyramids

(6) **Composition of these mathematical objects make the codomain of one of them the domain of the other. The vertical line test can easily determine whether a given graph describes one of these objects. In these relations, every input has exactly (*) one possible output.** For ten points, name these mathematical objects, often written in “f of x” form, often taught in algebra as “machines” that turn a number into a new number.

ANSWER: functions

(7) **A character in this novel is stretched to over ten feet tall after trying to appear on TV by using a shrink ray. Mike Teavee and Augustus Gloop accompany this novel’s title character as he tours a food plant with his (*) Grandpa Joe, after he finds a golden ticket in a candy bar.** For ten points, name this Roald Dahl novel in which the title boy inherits the legacy of Willy Wonka.

ANSWER: Charlie and the Chocolate Factory (do not accept Willy Wonka and the Chocolate Factory)

(8) **On this date in 1929, several members of Bugs Moran’s gang were killed, probably on the orders of Al Capone. This Christian feast day celebrates a saint who, according to legend, broke Roman law by performing (*) weddings for soldiers.** A Prohibition-era gangster massacre took place on, for ten points, what holiday now often celebrated with flowers and written expressions of love?

ANSWER: February 14 (accept St Valentine’s Day or St Valentine’s Day Massacre)

(9) **In one work, this man argues about holiness with Euthyphro [youth-uh-fro] but learns nothing to help him in his upcoming trial. Later, Crito tries to buy this man out of prison, but he refuses to escape his death penalty for (*) corrupting the youth of Athens.** For ten points, name this ancient Greek philosopher who was executed via a cup of poison hemlock.

ANSWER: Socrates

(10) **This element’s four valence electrons allow it to form four bonds with other elements. This element’s allotropes include diamond, graphite, and stable nanotubes, and an isotope of this element with an atomic mass of (*) 14 is used in archaeology for radiometric dating.** For ten points, name this element, the focus of organic chemistry, with atomic number 6 and atomic symbol C.

ANSWER: carbon (accept C before it is read)

(11) **Characters with this profession include Ornstein, the captain of Gwyn’s Four in *Dark Souls*. In *Hearthstone*, taunt minions can be killed by the battlecry of a “Black” one of these (*) warriors, who declares that “none shall pass” in reference to a skit from *Monty Python and the Holy Grail*.** For ten points, name this class of warriors that, in video games, often fight dragons with swords.

ANSWER: knights (accept Dragon Slayer before “Hearthstone” is read)

(12) **This biblical figure was thrown in jail for refusing the romantic advances of Potiphar’s wife. This man slipped a silver cup into a bag of grain after his brothers, including Gad and Judah, sold him into slavery. This brother of (*) Benjamin was Rachel’s first child, making him the favorite son of Jacob.** For ten points, name this biblical man who owned a beautiful coat.

ANSWER: Joseph

(13) **Monks in this country accidentally altered the dangerous confluence of three rivers when they built the Leshan Buddha. A tomb containing a mercury river and an army of (*) Terracotta soldiers honors this country's emperor Qin Shi Huangdi [chin shurr hwong-dee], who began building this nation's defense against the Huns. For ten points, name this nation, home to a Great Wall.**

ANSWER: People's Republic of China (accept Middle Kingdom; accept Zhongguo)

(14) **This author of "The Rhodora" and the Harvard address "The American Scholar" wrote that "a foolish consistency is the hobgoblin of little minds" in one essay. This man rented his pond to Henry David Thoreau, a fellow (*) Transcendentalist. For ten points, name this American author of essays like "The Over-Soul" and "Nature."**

ANSWER: Ralph Waldo Emerson

(15) **This project included man-made sections like the Gaillard Cut and Gatun Lake, and it was completed in 1914 due in large part to William Gorgas's efforts to control malaria and yellow fever outbreaks. This 48-mile-long structure included three (*) locks to help boats cross between the Atlantic and Pacific. For ten points, name this Central American engineering project.**

ANSWER: Panama Canal

(16) **One of these events radiates from Eltanin and Rastaban. Another of these events appears to originate from the constellation Perseus, as seen from the ground, and occurs each year in August. The (*) Draconids and Perseids are examples of these events, which arise from Earth passing through the debris path of a comet. For ten points, name these brilliant celestial displays in which hundreds of "shooting stars" appear.**

ANSWER: meteor showers

(17) **In a painting by this artist, five peasants gather around the title food under the light of a single lantern. *The Potato Eaters* is by this man, who created a still life with *Sunflowers* while living in Arles. This man painted the village of Saint-Rémy [son-ray-mee] under a (*) swirling sky while institutionalized for cutting off his own ear. For ten points, name this Dutch painter of *Starry Night*.**

ANSWER: Vincent Willem van Gogh

(18) **These organelles are plastids that replicate independently in the mesophyll of leaves. Within these double-membraned organelles, a fluid called stroma surrounds grana, stacks of thylakoids that carry out (*) light-dependent reactions. For ten points, name these cell organelles that contain chlorophyll, a green pigment that helps conduct photosynthesis.**

ANSWER: chloroplasts

(19) **In a short story written in this language, the book *The Combed Thunderclap* is kept in the infinite "Library of Babel." A poet wrote in this language that "tonight I can write the saddest lines" as part of his (*) *Twenty Love Poems and a Song of Despair*. For ten points, what language was used by Jorge Luis Borges and Pablo Neruda, writers from Argentina and Chile?**

ANSWER: Spanish (accept Español)

(20) **A wagon train retreating from this battle was caught at Monterey Pass, but George Meade couldn't catch up to it. During this battle, Lewis Amistead advanced to the "High Water Mark of the Confederacy," although (*) Pickett's Charge failed to turn the tide of this July 1863 battle. For ten points, name this battle of the Civil War, whose site was made a cemetery after Abraham Lincoln gave a namesake "Address" there.**

ANSWER: Battle of Gettysburg (accept Gettysburg Address)

Bonuses

(1) On the night of this battle, a lawyer sailed to an enemy ship to negotiate the release of Dr. William Beanes. For ten points each,

Name this September 1814 battle in which a “star fort” overlooking Baltimore Harbor survived a night of shelling relatively unscathed.

ANSWER: Battle of Fort McHenry (prompt on Battle of Baltimore)

The Battle of Fort McHenry took place during this war between the United States and Great Britain. This war ended with the Treaty of Ghent.

ANSWER: War of 1812

This aforementioned lawyer was held on a British ship for safety during the shelling of Fort McHenry. The sight of an American flag above the Fort inspired him to write a poem now used in the American national anthem.

ANSWER: Francis Scott Key

(2) For ten points each, give the following about the Middle Eastern religion Zoroastrianism.

In the Zoroastrian depiction of this event, Ahura Mazda formed Gayomard and six Amesha Spentas, divine immortals who carried out this process. In Christianity, this process took place over six days, as told in the opening chapter of Genesis.

ANSWER: creation of the Earth (accept “universe” or “heavens” in place of “Earth”)

The Zoroastrian *Vendidad* provides instructions for disposing of these things. To prevent contamination of the earth or of fire, these objects should be left on Towers of Silence for removal by scavenging birds.

ANSWER: dead bodies (accept corpses or equivalents)

Zoroastrianism was the dominant religion of this Middle Eastern region until it was conquered in the seventh century by the Rashidun Caliphate. This region roughly corresponds with modern Iran.

ANSWER: Persia (accept Sasanian Empire)

(3) For ten points each, give the following about Young’s double slit experiment.

The double slit experiment starts by shining light through a single slit and noting the effects of this phenomenon, in which light spreads as it passes through the hole.

ANSWER: diffraction

The interference pattern demonstrated in the two-slit phase of the experiment showed the wave properties of these quantum units of light, which have no mass.

ANSWER: photons

The double slit experiment provided evidence of the duality of light, that light can be described as behaving both as waves and as these small fragments of matter. Electrons, neutrons, and photons are often described as these objects.

ANSWER: particles (accept elaborations, like (sub)atomic particles)

(4) This English literary character appears in novels by Howard Pyle and Sir Walter Scott. For ten points each, Name this literary character who lives in Sherwood Forest with his “Merry Men,” and who robs the rich to feed the poor.

ANSWER: Robin Hood (accept Robin of Locksley; prompt on partial answer)

Robin Hood appears as “Locksley” in this Sir Walter Scott novel, in which the title knight jousts with the Black Knight and helps save Rebecca and Lady Rowena.

ANSWER: Ivanhoe

In *Ivanhoe*, this man is called “The Clerk of Copmanhurst.” This member of Robin Hood’s Merry Men is a jolly but reclusive friar.

ANSWER: Friar Tuck

(5) For ten points each, answer the following about references to hip-hop and musicals in Lin-Manuel Miranda’s hip-hop musical, *Hamilton*.

The Hamilton song “A Winter’s Ball” references this group’s “Hey Ladies.” This group was responsible for “No Sleep Till Brooklyn” and “Sabotage.”

ANSWER: The Beastie Boys

In a shout out to Biggie Smalls, Alexander spells his own name during this song. In the song he notes “I’m just like my country, I’m young, scrappy, and hungry” and states he isn’t “throwing away” the title concept.

ANSWER: My Shot

”Cabinet Battle #1” opens with a reference to this artist’s “Izzo (H.O.V.A.). This artist behind “Empire State of Mind” and “99 Problems” was met with applause when he saw the show with his wife Beyonce.

ANSWER: Jay Z (accept Shawn Corey Carter)

(6) In June 1976, thousands of high school students in Soweto, a township outside this city, protested the use of Afrikaans as the official teaching language, and over 100 protesters were killed by police. For ten points each,

Name this city, the largest in its country. Soweto was officially incorporated into this city in 2002.

ANSWER: Johannesburg

Johannesburg is the largest city in this African country, where Afrikaans was supported by the controlling government as part of an official state policy of racial segregation called Apartheid.

ANSWER: South Africa

This late President of South Africa and Nobel Peace Prize winner lived in Soweto until his 1962 arrest and transfer to Robben Island; he briefly returned to Soweto after his 1990 release from prison.

ANSWER: Nelson Mandela

(7) Free radicals catalyze a reaction that converts this compound into a diatomic form; as a result, this compound can be depleted from the atmosphere through certain air pollution. For ten points each,

Name this triatomic form of oxygen, which provides atmospheric protection against harmful solar radiation.

ANSWER: ozone (prompt on O₃)

A protective layer of ozone exists in this region of Earth's atmosphere, which lies just above the troposphere.

ANSWER: stratosphere

Ozone in the stratosphere absorbs radiation in this band of the electromagnetic spectrum; as a result, temperatures are higher at the top of the stratosphere than they are at the bottom. This type of radiation has wavelength just shorter than that of visible light.

ANSWER: ultraviolet radiation (accept UV)

(8) This man wrote a poem in which a historical pilgrim seeks the love of Priscilla Mullins, titled "The Courtship of Miles Standish." For ten points each,

Name this early American poet of historically-inspired poems like one that begins "by the shores of Gitchee Gumee," "The Song of Hiawatha."

ANSWER: Henry Wadsworth Longfellow

Longfellow wrote another historical poem about this American hero, a silversmith who rode to Lexington and Concord, Massachusetts to warn the colonists that the British were coming.

ANSWER: Paul Revere (accept Paul Revere's Ride)

Another historical Longfellow poem concerns one of these men. In the poem, this man stands "under the spreading chestnut tree" and entertains children by working a "flaming forge" and making the "bellows roar."

ANSWER: The Village Blacksmith

(9) This group of disorders commonly manifests as an extreme aversion to things like open spaces, the number 13, or heights. For ten points each,

Give this general term for anxiety disorders named for the Greek word for “fear.”

ANSWER: phobias

This term refers to the extreme fear of spiders and eight-legged creatures related to them.

ANSWER: arachnophobia (accept arachnephobia)

This phobia is often described as the fear of open spaces, since this term comes from the Greek for “fear of the public square.” Officially, this term refers to any anxiety stemming from the inability to escape an unsafe environment.

ANSWER: agoraphobia

(10) A painting is said to adhere to this principle if a rectangle drawn in the painting features something interesting 61.8% of the way along it. For ten points each,

Name this aesthetically pleasing ratio, expressed as the mathematical constant phi [fee], that is common in classical artwork.

ANSWER: golden ratio (accept golden mean or golden proportion or golden section or golden cut; accept divine in place of “golden” in all answers)

In keeping with the golden ratio, a little more than the top half of this Diego Velazquez painting is taken up by the ceiling and back wall of the room, dominating the small scene of the Infanta Margarita Teresa and her maids of honor.

ANSWER: Las Meninas (accept The Ladies in Waiting)

Despite hundreds of arguments otherwise, the Parthenon on this city’s Acropolis was not in any way designed with the golden ratio in mind.

ANSWER: Athens

(11) For ten points each, answer the following about the numbers three, five, and seven.

Three, five, and seven can be the side lengths of one of these three-sided polygons, because the sum of the smaller two is greater than the third.

ANSWER: (scalene) triangle (accept triangle inequality)

Seven is greater than five and five is greater than three. Because the “greater than” relation has this property, you can assume that seven is greater than three, as well.

ANSWER: transitive property (accept word forms like transitivity)

Three, five, and seven are the only set of three of these numbers that are two apart from each other. In 2013, Yitang Zhang announced a monumental proof toward answering whether there are infinitely many pairs of these numbers that are two apart, like eleven and thirteen.

ANSWER: prime numbers (accept twin primes)

(12) This advocate for landmine removal was killed in August 1997, a week before Mother Teresa's death. For ten points each,

Name this member of the British royal family, the first wife of Prince Charles. After her death, Elton John re-wrote the song "Candle in the Wind" as a tribute.

ANSWER: Princess Diana

Princess Diana was killed in this sort of accident. An official investigation blamed the intoxicated Henri Paul for causing it, rather than the paparazzi who had pursued Princess Di.

ANSWER: car crash (accept equivalents that automobile accidents)

The car crash took place in a tunnel near the Pont de l'Alma bridge in this European city.

ANSWER: Paris

(13) This man wrote a novel in which a resident of London is sentenced to be executed for the crimes of the Marquis St Evrémonde [mar-KEE son-teh-vray-MOND] and his family. For ten points each,

Name this English author of *The Old Curiosity Shop* and *Oliver Twist*.

ANSWER: Charles John Huffam Dickens

Name this Dickens novel about the French Revolution, in which Sydney Carton replaces his look-alike at the guillotine to protect Lucie Manette. This novel is set in Paris and London.

ANSWER: A Tale of Two Cities

In *A Tale of Two Cities*, Sydney Carton is executed in place of this man. This character is the nephew of the Marquis St Evrémonde, and marries Lucie in the novel.

ANSWER: Charles Darnay (accept either underlined name; accept Charles D'Aulnais; accept Charles St Evrémonde; prompt on "St Evrémonde" alone)

(14) One of these instruments made by Stradivarius was owned by Jacqueline du Pre, who disliked it for its unpredictability. For ten points each,

Name this large string instrument. It provides the lowest range in a traditional string quartet and the second-lowest range in many orchestras, behind only the double bass.

ANSWER: violoncello

The Davydov Stradivarius cello once played by Jacqueline du Pre now belongs to this Chinese-American cellist, possibly the most popular classical musician in America.

ANSWER: Yo-Yo Ma

Yo-Yo Ma has used the Davydov to play this Camille Saint-Saëns [san-sons] piece for cello and piano, the 13th movement of *The Carnival of the Animals*.

ANSWER: The Swan (accept Le Cygne)

(15) For ten points each, give the following about the Pauli exclusion principle.

The primary use of the Pauli exclusion principle describes the positioning of these negatively-charged particles around the nucleus of an atom.

ANSWER: **electrons**

The Pauli exclusion principle applies not just to electrons, but to all fermions, which are particles with a half-integer value for this property. This quantity describes the angular momentum of a particle.

ANSWER: **spin** (prompt on m_s)

While most naturally-occurring samples of this elemental gas have two neutrons, two protons, and thus zero spin, this element has a one-neutron species that has a spin of one-half. This element is produced from the fusion of hydrogen within stars.

ANSWER: **Helium** (or **He**)

(16) According to legend, this man ordered Frederic Remington to remain in then-quiet Cuba, telling him “you furnish the pictures, and I’ll furnish the war.” For ten points each,

Name this owner of the *New York Journal*, a rival paper of Joseph Pulitzer’s *New York World* in the late 19th century.

ANSWER: William Randolph **Hearst**

Hearst and Pulitzer’s newspapers engaged in this “colorful” form of sensationalist journalism, using catchy headlines instead of soundly-researched facts to attract readers.

ANSWER: **yellow** journalism

Hearst’s yellow journalism is often cited for raising support for the United States’ 1898 war against this European country over possession of Cuba, the Philippines, and other islands.

ANSWER: **Spain** (accept **Spanish**-American War)

(17) Answer the following about works of literature that have sparked debates about their authorship, for ten points each.

”Anti-Stratfordians” believe that this man did not write the many plays attributed to him, though most experts believe that he is in fact the author of such plays as *King Lear*, *Othello*, and *A Midsummer Night’s Dream*.

ANSWER: William **Shakespeare**

Pierre Louÿs wrote two essays asserting that Moliere’s plays were actually written by Pierre Corneille [**kor-NAY**], an author who wrote in this European language.

ANSWER: **French** language (accept la langue **français**)

Since this author was Truman Capote’s research assistant, it was rumored that she contributed to his novels *In Cold Blood* and *Breakfast at Tiffany’s*, and that he in turn may have ghostwritten this woman’s novel *To Kill a Mockingbird*.

ANSWER: Harper **Lee**

(18) For ten points each, answer the following about sickle cells.

Sickle Cell is a genetically inherited disorder in which these cells are misshapen, causing the obstruction of capillaries.

ANSWER: **red blood cells** (accept **erythrocytes**; prompt on “blood cells”)

Sickle cell disorders are caused by an abnormality in this protein, which carries oxygen in the blood.

ANSWER: **hemoglobin**

The trait that creates sickle cell disorders also protects against this mosquito-borne disease, possibly because the Plasmodium parasite that causes this disease can't complete its life cycle on the diseased cells.

ANSWER: **malaria**

(19) Because of widespread malaria in Jamestown, this city was made the capital of its colony for eighty years in the 1700s, until Governor Thomas Jefferson declared Richmond the capital instead. For ten points each,

Name this city, home to the second-oldest college in the U.S. and a district that serves as a living museum of colonial history.

ANSWER: (Colonial) **Williamsburg**

Just east of Williamsburg is this town, the site of a crucial siege that ended on October 19, 1781.

ANSWER: **Yorktown**

Williamsburg, Yorktown, and Jamestown form a “Historic Triangle” on the east coast of this U.S. state.

ANSWER: **Virginia**

(20) Dogs hold many varied positions in Greek myths. For ten points each,

Name this three-headed dog who guards the entrance to Hades.

ANSWER: **Cerberus**

When Odysseus returned to Ithaca after the Trojan War, this dog was the only creature who recognized him. Shortly after reuniting with his master after decades apart, this long-lived dog died.

ANSWER: **Argos**

The dog Aura belonged to Atalanta, a legendary huntress and follower of this Greek goddess of the hunt, who was the twin sister of Apollo.

ANSWER: **Artemis**