

Playoff Round 1

Tossups

(Tossup 1) An algorithm named after this man involves dividing one integer by another and using the remainder to find the greatest common divisor. That method was outlined in the same book where he proved that the number of prime numbers is infinite. Hyperbolic geometry follows all but the last of this man's five postulates, also known as the parallel postulate. For the point, name this man who wrote the Elements, an ancient Greek mathematician known as the father of geometry.

ANSWER: Euclid of Alexandria

(Tossup 2) One work by this writer portrays the loneliness of a dying Caribbean dictator. "Leaf Storm", an early work by this writer, is set in a fictional town based on Aracataca. This author, a leading figure of magical realism, portrays the rise and fall of the Buendia family in Macondo in this most famous work. For the point, name this author of "The Autumn of the Patriarch" and "One Hundred Years of Solitude".

ANSWER: Gabriel Garcia-Marquez

(Tossup 3) For a loop whose normal vector is perpendicular to a magnetic field, this quantity is equal to the products of number of turns, the loop area, the current, the magnetic field strength. Torsion is the twisting of objects because of this quantity. This quantity is the time derivative of angular momentum, and is equal to the angular acceleration times the moment of inertia. For the point, name this rotational analogue of force.

ANSWER: torque

(Tossup 4) A garbled transmission during this battle led one commander to believe he only had 15 rounds of ammunition remaining. The winning commander of this battle gave the order "You may fire when you are ready, Gridley" and commanded from the flagship Olympia. This battle ended with George Dewey's Asiatic Squadron annihilating the Spanish Pacific Squadron. For the point, name this decisive Spanish-American War naval battle in the Philippines.

ANSWER: Battle of Manila Bay

(Tossup 5) A composer from this country used 52 strings to depict an atomic bomb in Threnody to the Victims of Hiroshima. Examples of a 3/4 dance named for this country include "Military" and "Heroic" by a composer who depicted this country in 27 etudes like "Black Key" and "Torrent." The "Revolutionary" etude depicts the November Uprising in this country. For the point, name this home country of Frederic Chopin who composed many polonaises.

ANSWER: Poland [accept Polska]

(Tossup 6) This god was worshiped as the chief god of the Hyksos and he was associated with the Hittite god Teshub. He fought another god in multiple “contendings”, including a boat race which he lost. This god attempted to usurp power by dismembering his brother which led to his long conflict with his nephew Horus. For the point, name this Egyptian god of chaos, violence and the desert.

ANSWER: Set (Accept Seth)

(Tossup 7) This man claimed that technology causes people to be “unhappy gods with prosthetic limbs” in the book *Civilization and its Discontents*. This psychologist proposed the id, ego, and superego. He theorized the Oedipus Complex as an explanation for a boy’s desire for his mother and jealousy towards his father. For the point, name this author of *The Interpretations of Dreams*, who was also known as the father of psychoanalysis.

ANSWER: Sigmund Freud

(Tossup 8) This author translated the Book of Jonah and Beowulf into modern English. As a child, this man was bitten by a large spider, which may have influenced some chapters in his novels. A number of this man’s works detail the backstory and mythology that he created for his imaginary world. This Oxford linguist created several languages for that world, including Quenya and Entish. For the point, what British author created Middle-Earth for *The Lord of the Rings* and *The Hobbit*?

ANSWER: JRR Tolkein

(Tossup 9) One leader of this country was criticized in the “Bringing Them Home” report for not apologizing to a group. Another leader of this country, Robert Menzies, emphasized his connection to the working class with “The Forgotten People” speech. John Howard, a leader of this country, eventually apologized to the “Stolen Generation”. For the point, name this country whose Aborigines have been historically oppressed.

ANSWER: Commonwealth of Australia

(Tossup 10) This man created a belief system whose modern adherents belong to two main sects, the Gabars and the Parsees. This thinker believed that there is a force for good in the universe, which he termed Asha, which battles an evil force, or Druj. This man’s teachings are collected in the Avesta and he believed in a single god whom he called Ahura Mazda. For the point, name this founder of an influential monotheistic religion who was also known as Zarathustra.

ANSWER: Zoroaster (accept Zarathustra before he is mentioned)

(Tossup 11) Ketamine is used to treat this disease as part of the Milwaukee protocol. This bullet-shaped virus can cause encephalopathy, hypersalivation, and paralysis. In humans, this virus is treated with a post-exposure prophylaxis injection to the abdomen. Characteristic foaming at the mouth can be found in animals infected by this virus. For the point, name this virus that spreads through the nervous system by the bites of dogs, bats, and other animals.

ANSWER: rabies

(Tossup 12) In 2004, a massive duckweed infestation began occurring at this lake. The General Rafael Urdaneta Bridge spans this lake's Tablazo Strait outlet. A famous type of atmospheric event occurs at the location where the Catatumbo River flows into this lake. Most of the crude oil extracted by the state-run Petroleos de Venezuela company is found in this lake's basin. For the point, name this large South American lake that is, in fact, a bay.

ANSWER: Lake Maracaibo

(Tossup 13) In one work, this man wrote of "Grave Alice, and laughing Allegra/And Edith with golden hair." One of this man's poems includes the adage, "Into each life some rain must fall." This author was often attacked by his contemporary Edgar Allan Poe and his most famous poems include "The Children's Hour," and "The Rainy Day." For the point, name this American author who began a poem with the lines, "Listen My Children and you Shall Hear/Of the midnight ride of Paul Revere."

ANSWER: Henry Wadsworth Longfellow

(Tossup 14) Bradford Washburn climbed this mountain on the West Buttress Route, which has become the most popular way to climb it. The Wickersham Wall is located on one of this mountain's glaciers, of which the Kahiltna Glacier is the longest one. This mountain's name means 'high' or 'tall' in Koyukon Athabaskan. Once named after President William McKinley, this is, For the point, which tallest mountain in North America, located in Alaska?

ANSWER: Mount Denali

(Tossup 15) A polar vortex breakdown can cause an event known as SSW, which occurs in this region. The Brewer-Dobson model of circulation occurs in this region, caused by a phenomenon called Rossby-Wave Pumping. A temperature inversion occurs as one goes up into this region, which lies just above the tropopause. For the point, name this layer of the atmosphere above the troposphere where planes often fly and contains the ozone layer.

ANSWER: Stratosphere

(Tossup 16) Canadian Ambassador Ken Taylor sheltered 6 targets of this event in the "Canadian Caper." Operation Eagle Claw was a failed attempt to end this event and this event was depicted in the 2012 film *Argo*. Jimmy Carter's Presidency was undermined by this event which ended with the release of diplomats after Ronald Reagan's inauguration. For the point, name this event that began following the storming of the American Embassy in Tehran.

ANSWER: Iran hostage crisis

(Tossup 17) This Neapolitan created two busts named *Blessed Soul* and *Damned Soul*. After sculpting a bust of his mistress, Costanza, he discovered she was having an affair with his brother and sent a servant to attack her with a razor. In Rome, this man designed the huge baldacchino [bald-uh-key-noh] inside St Peter's, the Cornaro Chapel, and a famous fountain. For the point, what Baroque sculptor created the *Fountain of the Four Rivers*, as well as the *Ecstasy of St Theresa*?

ANSWER: Gian Lorenzo Bernini

(Tossup 18) An extended plane of these numbers can be mapped to the Riemann sphere. One subset of these numbers are known as Gaussian integers. These numbers are required for the fundamental theorem of algebra. These numbers can be thought of as “two dimensional” and are represented on Argand diagrams. They are of the form “a plus b times i”, where i is the square root of negative one. For the point, name these numbers commonly symbolized with a bold C.

ANSWER: complex (prompt on “imaginary”)

(Tossup 19) A novel set in this state follows Peter Fallow, who writes a series of articles about a black man named Henry Lamb. In a novel set in this state, the protagonist is injured in an explosion at Liberty Paints and stabs Ras the Exhorter. Henry James’s Washington Square is set in this state. Ellison’s Invisible Man takes place in, for the point, what state, the setting of The Bonfire of the Vanities which criticized Wall Street?

ANSWER: New York

(Tossup 20) Chief Justice Roger Taney held this position in Andrew Jackson’s cabinet before going on to write the opinion in Dred Scott v. Sanford. The first holder of this position had an affair with Maria Reynolds and wrote most of the Federalist Papers. That holder of this position died at Weehawken, New Jersey after a dispute with Aaron Burr. For the point, name this position first held by Alexander Hamilton, which oversees financial matters in the US.

ANSWER: Secretary of the Treasury (do NOT accept “Secretary of Commerce”)

(Tossup 21) A high cyclin B concentration is needed to enter this phase after crossing the G2 checkpoint. Chiasmata form in one version of this phase to achieve crossing over, and in animal cells this phase sees the centrosomes move apart. Both the nucleolus and nuclear envelope disappear during this phase while the spindle apparatus assembles. Chromatin condenses into chromosomes during, for the point, which phase of mitosis that is followed by metaphase?

ANSWER: prophase (prompt on “mitosis” or “meiosis”)

(Tossup 22) In these poems, one phrase associated with a certain season is weaved in its verses. Authors of these works often use the “Year time chronicle” to look up such phrases, a feature not found in similar Senryu works. Free-verse variants of these works, pioneered by Hosai Ozaki and Santoka Taneda, do not come in the fixed 5-7-5 structure. For the point, name this Japanese style of poetry, whose masters include Matsuo Basho.

ANSWER: haiku

(Tossup 23) The left of this painting the troop banner is raised while on its right a group of men hold their pikes high, while its center features a golden girl emerging from behind a musketeer. In this painting, a man dressed in yellow with a white sash, Willem van Ruytenburch, stands beside a man in black with a red sash who leads a group of soldiers. For the point, name this painting with Captain Frans Banning Cocq at its center, by Rembrandt van Rijn.

ANSWER: The Night Watch

(Tossup 24) In 2012, this man mysteriously vanished for several weeks and canceled a meeting with Hillary Clinton. This leader claimed to remove corruption by striking both “tigers and flies” and secured his position by removing enemies like Bo Xilai and Zhou Yongkang. For the point, name this advocate of “socialism with Chinese characteristics” whose term as the leader of China was indefinitely extended by a 2018 amendment of Constitution.

ANSWER: **Xi** Jinping

(Tossup 25) This empire’s army was decisively defeated at the Battle of Otumba. A group of invaders massacred this empire’s nobles in the Alvarado Massacre before being briefly driven out of its capital city in La Noche Triste. Often called the “Triple Alliance”, this empire included the cities of Texcoco, Tlacopan and the capital Tenochtitlan. For the point, name this empire based in modern-day Mexico which was conquered by Hernan Cortes.

ANSWER: **Aztec** Empire (Accept **Triple Alliance** before it is mentioned)

(Tossup 26) One event in this project landed in the Taurus-Littrow region. This project was conceived after Projects Mercury and Gemini. The most successful mission of this project involved a landing at the Sea of Tranquility, prompting the quote “That’s one small step for man, one giant leap for mankind”. For the point, name this NASA program of which its 11th landed Neil Armstrong on the Moon.

ANSWER: **Apollo program**

(Tossup 27) The father of this man, Terah, owned an idol shop. This prophet said, “This is my Lord” each time after seeing a star, the moon, and the sun. This man’s wife ran between the al-Safa and al-Marwa hills seven times before God responded with the well of Zamzam. With his son, this man built the “House of God” in Mecca. He is the father of Ishaq and Ismail. This person nearly sacrificed his son Isaac to God. For the point, name this father of Judaism.

ANSWER: **Abraham** (accept **Abram** or **Ibrahim**)

(Tossup 28) This writer was also a famed historian, leaving works like “The Outline of History” and “A Short History of the World”. “The World Set Free”, a 1914 novel by this writer, predicted the development of atomic weapons. A radio adaptation of one major work by this writer made its audience believe that an alien invasion was actually happening. “The War of the Worlds”, as well as “The Invisible Man” was written by, for the point, what major author of science fiction?

ANSWER: H.G. **Wells**

(Tossup 29) Rosa Luxemburg was killed by the freikorps in this country during the Spartacist Uprising. Wolfgang Kapp attempted to overthrow this country’s government in 1920, which was centered on Weimar before World War II. A beer hall in this country was the site of an attempted coup in 1923, leading to the imprisonment of a man who would write Mein Kampf. For the point, name this country where that Beer Hall Putsch occurred in Munich.

ANSWER: **Germany** (accept Weimar **Germany** or **Weimar Republic**)

(Tossup 30) In one type of this technique, a polyhistidine tag is added to certain proteins so they can bind to nickel beads. This technique's affinity and size exclusion types are performed in columns. This technique's liquid or gas types are often performed before mass spectrometry. For the point, name this technique used in chemistry to separate a mixture through the motion of a mobile phase through a stationary phase.

ANSWER: chromatography (accept specific types)

Backups

(Tossup 31) This composer signed an autograph for the granddaughter of Johann Strauss II, Alice von Meyszner-Strauss, by writing the first few notes of Strauss' waltz, "The Blue Danube." Robert Schumann's "New Paths" praised this man, who wrote one work after earning an honorary degree from the University of Breslau. This composer wrote a song for Bertha Faber's son. For 10 points, name this German composer of a famous "lullaby."

ANSWER: Johannes Brahms