

Round 1

Tossups

(Tossup 1) A cevian is a line that divides one of these shapes into two parts. Feuerbach's circle can be constructed from this shape. A mathematical statement named for this shape can be demonstrated by using the Cauchy-Schwarz inequality. In Euclidean geometry, this shape with an orthocenter and incenter has angles that sum to 180 degrees. Scalene, obtuse, and right are classifications of, for 10 points, what geometric figures with three sides?

ANSWER: **triangles** (accept specific **triangles** like "right" triangle or "equilateral" triangle)

(Tossup 2) Explorers in this novel discover the wreckage of the Battle of Vigo Bay and find open sea at the South Pole, where they plant a black flag with a gold letter "N." A character in this novel explores Atlantis and gets caught in the Maelstrom while his prisoners Conseil [**kon-SYE**], Ned Land, and Pierre Arronax escape the Nautilus. For the point, name this Jules Verne adventure novel about Captain Nemo's extensive underwater travels.

ANSWER: ***Twenty Thousand Leagues Under the Sea*** (accept ***Vingt mille lieues sous les mers***)

(Tossup 3) For non-organic elements, this process reduces them to their organic state or forms oxide compounds with them. When performed incompletely on organic matter, this process results in carbon monoxide. A slow, incomplete form of this process is called smoldering. This process typically releases carbon dioxide and water vapor, and results from rapid oxidation. For the point, name this chemical process that causes fuel to be burned.

ANSWER: **combustion** (accept **burning** before mention; accept any answer describing **flames** or **fire**)

(Tossup 4) This man's only legitimate sons, Paralus and Xanthippus, both died during a plague outbreak. This man organized the ostracism of his rival Cimon by claiming he supported Sparta. This man's lover Aspasia likely wrote a funeral oration that this man gave after the first year of the Peloponnesian War. Using funds from the Delian League, this man promoted the arts by funding projects such as the Parthenon. For the point, name this statesman who led Athens through its Golden Age.

ANSWER: ***Pericles***

(Tossup 5) This painting's creator indicated he "was here" in 1434 in the background above a mirror decorated with scenes of the Passion of the Christ. A single candle burns in an elaborate chandelier that hangs above a bed draped in red in this painting. A pair of wooden clogs sit next to a small dog at the feet of this painting's female figure. For the point, name this painting by Jan Van Eyck named for its assumed subjects: a black-clad Italian merchant and his green-robed wife.

ANSWER: The ***Arnolfini Wedding*** (accept The ***Arnolfini Portrait***; accept Giovanni ***Arnolfini and his Bride***; accept any description including the name ***Arnolfini*** and the idea of ***marriage***)

(Tossup 6) This natural object sat atop the Mnevis Bull, which represented a god who wore a cobra-topped crown representing this object, and who was syncretized with Amun. This object was the focus of a monotheistic Egyptian cult that honored the disk Aten and worshipped this object in Heliopolis. Ra was a god of, for the point, what celestial object around which the Earth orbits?

ANSWER: *sun*

(Tossup 7) This phenomenon travels quickly through A-delta fibers and slowly through C fibers. The Wong-Baker scale is used to indicate levels of this phenomenon. This phenomenon is also known as nociception and can be inhibited by capsaicin. This phenomenon is suppressed with analgesics such as NSAIDs and opiates. For the point, name this phenomenon caused by things such as burns or cuts.

ANSWER: *pain* (accept *discomfort*; accept *nociception* before mentioned)

(Tossup 8) In one speech, this man declared that “the world must be made safe for democracy.” This President’s attempts to pass the ratification of one treaty through the Senate were opposed by Henry Cabot Lodge. This President called for the creation of the League of Nations as part of his Fourteen Points, which he tried to apply in negotiating the Treaty of Versailles. For the point, name this U.S. president who was in office during World War I.

ANSWER: Woodrow *Wilson* (accept Thomas Woodrow *Wilson*)

(Tossup 9) A series of limestone shoals called Adam’s Bridge connects this country to Rameswaram Island. In this country, the former royal palace of the Kingdom of Kandy has been transformed into the Temple of the Tooth. Despite its official capital being Sri Jayawardenepura Kotte, most government officials in this country operate out of Colombo. For the point, name this island nation located south of India.

ANSWER: Democratic Socialist Republic of *Sri Lanka*

(Tossup 10) In this novel, Bluebell and Jessie’s opposition vote against Willingdon Beauty fails, and their children are forcibly reeducated by his successor. Minimus praises the “lord of the swill-bucket” in this novel, in which Old Major’s death leaves a power vacuum that fuels conflict between Snowball and Napoleon. For the point, name this novel in which George Orwell modeled the Soviet Revolution with pigs that take over the title location from humans.

ANSWER: *Animal Farm*

(Tossup 11) John Cage wrote a work in this genre entitled [This Genre] in Four Parts. Mozart dedicated six pieces of this genre including the work “Dissonance” to Joseph Haydn, known as the “father” of this musical form, who wrote “Emperor” in this style of chamber music. For the point, what compositions are written for a musical ensemble comprising two violins, one viola and one cello?

ANSWER: *string quartets* (prompt on “quartet” or “string ensemble”)

(Tossup 12) This region is home to the D-double-prime layer, and lies just above the Gutenberg discontinuity. The upper portion of this region includes the asthenosphere. Convection in this region causes upwelling that can create hotspots, which form volcanic islands. For the point, name this layer of the Earth that forms the majority of the Earth's volume and lies beneath the crust.

ANSWER: *mantle*

(Tossup 13) In Islamic tradition, this prophet is found by Asiya after being sent away by his mother, Jochebed, and was buried near Jericho. This man is credited with writing the Torah, the first five books of the Hebrew and Christian Bibles, which tell the stories of this man leading the Hebrews out of slavery in Egypt. For the point, name this prophet who spoke to God in a burning bush and received the Ten Commandments.

ANSWER: *Moses* (accept *Moshe*; accept *Musa*)

(Tossup 14) In this literary work, the protagonist sees fallen angels guarding the City of Dis after he crosses the river Styx. A character in this work climbs up the torso of a character who gnaws on Brutus and Judas, and who is trapped in a lake of ice as punishment for betrayal. This poem's protagonist is guided by the deceased poet Vergil after encountering him in Limbo. For the point, name this first section of Dante's *Divine Comedy*, in which Dante travels through Hell.

ANSWER: *Inferno* (prompt on "Divine Comedy" or "Divina Comedia" before mentioned)

(Tossup 15) The winning commander of this battle refused to accept a sword from Charles O'Hara, instead directing him to give it to Benjamin Lincoln. During this battle, John Laurens helped Alexander Hamilton seize control of Redoubt Number 10. Troops under Charles Cornwallis were unable to retreat from this battle due to the Comte de Grasse's victory at the Battle of the Chesapeake. For the point, name this 1781 clash, the final major battle of the American Revolution.

ANSWER: Battle of *Yorktown*

(Tossup 16) A car mechanic in this novel complains to Michaelis about finding a dog leash on his wife's dresser, and lives near a billboard advertising Doctor T.J. Eckleburg's services. George Wilson shoots this novel's title character in his pool, not knowing that Myrtle had really been killed by Daisy over her affair with Tom Buchanan. For the point, name this novel narrated by Nick Carraway and written by F. Scott Fitzgerald?

ANSWER: *The Great Gatsby*

(Tossup 17) "Positive" symptoms of this disorder can be caused by excess dopamine receptor activation. The catatonic form of this disorder can result in waxy flexibility and loss of speech, while the disorganized form of this disorder is characterized by "word salad" speech and flat affect. This disorder's paranoid form involves delusions of persecution. For the point, name this mental disorder characterized by hallucinations.

ANSWER: *schizophrenia*

(Tossup 18) This empire's agriculture depended on floating gardens called *chinampas*. This empire fought "flower wars" against enemy city-states like Tlaxcala [**t-las-KAH-lah**]. An invading army held this empire's ruler hostage while attempting to take control of the capital city, Tenochtitlan. For the point, name this empire in modern-day Mexico that was ruled by Moctezuma and defeated by the conquistador Hernán Cortes.

ANSWER: *Aztec* Empire

(Tossup 19) The creatures that live in this region collectively make up the benthos, and most subsist on detritus. Some flatworms from this region consume sulfur from hydrothermal vents. Due to a lack of light in this region, many animals here have bioluminescence. For the point, name this region of the ocean, where animals have adapted to having no sunlight.

ANSWER: *ocean floor* (accept *sea floor*; accept answers describing the *bottom of the ocean/sea*; accept *abyssal* or *pelagic* zones)

(Tossup 20) A rush hour bridge collapse in this city in 2007 led to the deaths of 13 people. In this city's neighborhood of Falcon Heights, officer Jeronimo Yanez shot Philando Castile during a routine traffic stop. Governor Tim Walz, who earlier banned the use of the chokehold by police, signed a bill that defunded this city's Police Department in 2020. For the point, name this hometown of George Floyd and Minnesota's largest city.

ANSWER: *Minneapolis*

(Tossup 21) The Minkowski question-mark function maps these objects to a dyadic version of these objects. The Stern-Brocot tree contains each of these objects exactly once, A boldfaced letter 'Q' represents the set of these objects, of which quantities like the natural logarithm and 'pi' are considered opposite to them. For the point, identify these numbers that can be expressed as a fraction a over b, where a and b are integers.

ANSWER: *Rational numbers*

(Tossup 22) In a novel by this author, the title characters get the Dreaded Shrinks when the Roly-Poly bird helps the Muggle-Wumps, a group of monkeys. This author of *The Twits* wrote a book in which Mike Teavee is put on a stretching machine after he shrinks himself into a television, and Augustus Gloop becomes thin after being pulled through a tube while on a tour with Willy Wonka. For the point, name this author of *Charlie and the Chocolate Factory*.

ANSWER: Roald *Dahl*

(Tossup 23) This artist painted the *Arrival of the Normandy Train* in Gare Saint-Lazare, and repeatedly painted the Rouen Cathedral. This man painted his wife, Camille, *On Her Deathbed* and standing in a field with her son under a parasol. This man created outdoor paintings of water lilies under a green bridge in his garden. For the point, name this French Impressionist painter of *Impression: Sunrise*.

ANSWER: Claude *Monet* (accept Oscar-Claude *Monet*; do not accept or prompt on "Manet")

(Tossup 24) In the aftermath of this event, gas station owner Balbir Singh Sodhi was murdered in Mesa, Arizona. A national memorial was created in Stonycreek Township, Pennsylvania, to honor forty victims of this event. The PATRIOT Act was passed after this event, which led George W. Bush to declare a global “war on terror.” For the point, name this terrorist attack launched by Al-Qaeda during which hijacked planes destroyed the Twin Towers.

ANSWER: **9/11 attacks** (accept anything indicating attacks on *September 11th*; prompt on answers indicating attacks on specific locations like the **World Trade Center**)

(Tossup 25) The “capture” of this particle results in the production of a neutron and a neutrino. Molecules can take on a “bent” geometry when they possess lone pairs of these particles. Chemical bonds are formed by atoms sharing these particles. These particles fill orbitals around the atomic nucleus. For the point, name these subatomic particles that carry the negative charge.

ANSWER: **electrons**

(Tossup 26) In this state, the Big and Little Maumelle rivers meet at Pinnacle Mountain State Park. This state is home to the Victorian resort village of Eureka Springs, which is located in its portion of the Ozarks. Walmart’s global headquarters is located in this state’s city of Bentonville, and this state’s capital contains the Central High School historic site. For the point, name this state where the Clinton Presidential Library is located in Little Rock.

ANSWER: **Arkansas**

(Tossup 27) According to Homer, this mythical Greek figure helped his uncle by guarding the cattle of Laomedon while Poseidon built the walls of Troy. As a baby, this figure killed the Python when it threatened his mother, Leto. This god participated in a contest against the satyr Pan after he invented the lyre. For the point, name this twin brother of Artemis, the Greek god of light, music, and prophecy.

ANSWER: **Apollo** (accept *Phoebus Apollo* or *Phoibos Apollo*)

(Tossup 28) This poem’s speaker imagines “Seraphim whose foot-falls [tinkle] on the tufted floor” and wishes to “quaff this kind nepenthe” [neh-PEN-thee] to forget his lost love. This poem’s speaker asks questions about “a sainted maiden,” Lenore, to a character who has “perched upon a bust of Pallas just above” a chamber door, and is upset when the title creature responds “Nevermore.” For the point, name this Edgar Allan Poe poem about a mysterious black bird.

ANSWER: **The Raven**

(Tossup 29) The magnetosphere of this planet forms a corkscrew shape, and this planet’s existence was predicted by the Titius-Bode law. Two of this planet’s moons are Titania and Oberon, and its axial tilt is almost ninety degrees. This planet and Venus are the only planets in the solar system with a retrograde orbit. For the point, name this planet, the second farthest from the sun.

ANSWER: **Uranus**

(Tossup 30) This city's Olympiastadion was where Jesse Owens won his gold medals in the 1936 Summer Olympics. During a Soviet blockade of this city, Gail Halvorsen used mini parachutes to drop candy to children. Ronald Reagan urged Mikhail Gorbachev to tear down a structure in this city that fell near the end of the Cold War. For the point, name this city that was divided by a wall for much of the Cold War, the current capital of Germany.

ANSWER: *Berlin*

Tiebreaker or Replacement

(Tossup 31) This order is the sister taxon of Lagomorpha, with which it forms the Glires clade. One member of this order was made to run through mazes as part of the "Kerplunk" experiment. The largest member of this order is the capybara. Other large members of this order include porcupines and beavers. For the point, name this order of mammals that includes rats and mice.

ANSWER: *rodents* (accept *rodentia*)