## Bowl Round 4

## First Half

(Tossup 1) Premiered at the Mariinsky Theatre, this man retold a story from Slavic myth where the city of Kitezh on the Volga became invisible when confronted with the Tatar menace. This man had his works banned by the police after his students, who performed his work Kashchey the Deathless (*), participated in the Revolution of 1905. Working on Borodin's Prince Igor inspired this composer to create a symphonic suite based on One Thousand and One Nights named Scheherazade. For ten points, name this member of the Russian "Mighty Five" that composed the "Flight of the Bumblebee."

ANSWER: Nikolai Rimsky-Korsakov
(Bonus 1) Popular late night act and actress Charo studied under a master of this instrument, Andres Segovia. For ten points each:

Part 1: Segovia was a master at playing the "Spanish" style of what string instrument? "Bob Dylan going Electric" refers to Dylan's abandoning of the acoustic form of this instrument in the mid 1960s.
ANSWER: Guitar
Part 2: An early depiction of this guitar-like string instrument is in John Rose's The Old Plantation, seen in a slave's hands while other black people dance.
ANSWER: Banjo
Part 3: This multi-instrumentalist played a hybrid of the Guitar and Banjo as a child. This Guitarist who popularized Romani Jazz wrote Nuages and Minor Swing.
ANSWER: Django Reinhardt
(Tossup 2) This island's northwest formerly was home to the now extinct Dorset Culture. This island's official language is Kalaalisut. This island is separated from (*) Baffin Island by the Davis Strait. This island, which hosts the U.S.'s Thule Air Base, is locally governed from the city of Nuuk. For ten points, name this largest island on Earth, a glacier covered dependency of Denmark.

Answer: Greenland (or Kalaallit Nunaat)
(Bonus 2) This mountain names the National Bank of a Latin American nation and canton in the Manabi province. For ten points each:
[10] Name the stratovolcano often known as Wawa, which is Kichwa for "baby." Antonio José de

Sucre defeated a Spanish colonial army in a decisive battle on this mountain's slopes. ANSWER: Pichincha
[10] Pichincha is 120 miles north of what other Andean stratovolcano, the farthest point on the Earth's surface to Earth's center.
ANSWER: Chimborazo
[10] Both Chimborazo and Pichincha are in this Andean nation, with both mountains appearing in its capital of Quito's skyline.
ANSWER: Republic of Ecuador
(Tossup 3) A commission by this man for the Royal Palace depicts a tale from Tacitus where the title one-eyed Germanic chief Claudius Civilus plans the Batavian Uprising. This artist depicts a less duplicitous scene of King (*) David's encounter with the title beauty in Bathsheba at Her Bath. Captain Frans Banninck Cocq and his namesake company of arquebusiers and pikemen are being deployed in The Night Watch. For ten points, name this Dutch Golden Age painter of The Anatomy Lesson.
ANSWER: Rembrandt Harmenszoon van Rijn
(Bonus 3) This painting depicts Peter holding a knife in his right hand, a reference to the story that Peter will go on to cut off the ear of a soldier while trying to stop Jesus's arrest. For ten points each,

Part 1: Name this painting on a wall of the Santa Maria delle Grazie in Milan. Answer: The Last Supper

Part 2: This Italian Renaissance artist and student of Andrea del Verrocchio painted The Last Supper in the Santa Maria delle Grazie.
Answer: Leonardo da Vinci

Part 3: This other artist's version of The Last Supper is in the San Giorgio Maggiore church in Venice, is considered a Mannerist masterpiece, and unusually places the main table of the meal on a diagonal axis.
Answer: Jacopo Tintoretto
(Tossup 4) Bolling v. Sharpe was one of several companions to this Supreme Court case. A similarly-named follow-up to this case affirmed that its ruling had to be accomplished "with all deliberate speed." The chief counsel for the NAACP (*), Thurgood Marshall, successfully argued for the plaintiffs of this case that effectively overturned Plessy v. Ferguson's doctrine of "separate but equal." For ten points, name this 1954 case that ended segregation in public schools.

Answer: Brown v. Board of Education of Topeka
(Bonus 4) A song from the musical Hamilton pairs the name of this city with the song "The World Turned Upside Down," which a band supposedly played during its surrender. For ten points each,

Part 1: Name this Virginia city whose surrender by the British was the last major engagement of the Revolutionary War.
Answer: Yorktown

Part 2: This British lord surrendered Yorktown to the colonial forces. Answer: Charles Cornwallis

Part 3: Cornwallis surrendered at Yorktown in this decade. The U.S. declared independence from the U.K. in the decade prior to this decade.
Answer: 1780s (prompt on partial answers)
(Tossup 5) This author stated that "The night is chilly, but not dark" in his poem "Christabel." A character created by this poet "stoppeth one of three" wedding guests to tell him a story in a poem that was collected in (*) Lyrical Ballads with the poems of his friend, Wordsworth. The title character shoots an albatross and is cursed, describing "water, water, every where, / nor any drop to drink" in, for ten points, what English poet's The Rime of the Ancient Mariner?

Answer: Samuel Taylor Coleridge
(Bonus 5) At the end of this novel, citizens of the title location note that "it was impossible to say which was which" in a room of humans and bipedal pigs. For ten points each,

Part 1: Name this novel in which the pigs Snowball and Napoleon struggle for power after chasing the humans away from the title location.
Answer: Animal Farm

Part 2: Animal Farm is by this English author, who also wrote 1984.
Answer: George Orwell (accept Eric Arthur Blair)

Part 3: In Animal Farm, Napoleon sells this hard-working horse to a glue marker when he gets old, although he claims that this horse instead dies at an animal hospital.
Answer: Boxer
(Tossup 6) While fleeing his own country, this leader was killed and hanged upside down in the Square of the 15 Martyrs. This man deposed Haile Selassie after ordering the invasion of (*) Ethiopia despite objections by the League of Nations. This dictator was
appointed Prime Minister after leading the Blackshirts during the March on Rome. For ten points, name this Italian dictator during World War II.

## Answer: Benito Musolini

(Bonus 6) The Fosse Way was a road that connected cities in this province. For ten points each,

Part 1: Name this island province that Rome began to conquer under Claudius. A druid priestess in this province led an uprising that was put down by the governor Gaius Suetonius Paulinus.
Answer: Roman Britain (or Britannia)
Part 2: During the reign of Hadrian, one of these objects was constructed at Britannia's northern border. Another one of these structures named for Hadrian's successor Antoninus Pius 20 years later.
Answer: walls (or Hadrian's Wall or the Antonine Wall)
Part 3: This man invaded Britain twice during the Gallic Wars. After crossing the Rubicon, this man established a dictatorship in Rome before being assassinated in 44 BC by a group of senators.
Answer: Julius Caesar
(Tossup 7) In a Tintoretto painting, this holy figure appears while bodies are being exhumed, only seen by an elder based on the commissioner Rangone. This saint, the founder of the Church of Alexandria, first met (*) Peter while traveling through Asia Minor and was brought along to act as a Greek interpreter. This man names a biblical book that contains the line "The Sabbath was made for man, not man for the Sabbath," said in a synagogue by Jesus. For ten points, name this early Church leader that names one of the Four Gospels, with Matthew, Luke, and John.
ANSWER: Saint Mark the Evangelist
(Bonus 7) Jesus says "on this rock I will build my church" in a dialogue with this saint. For ten points each,

Part 1: Name this saint who was predicted to deny and disown Jesus three times before the rooster crows. This apostle is generally regarded as the first pope.
ANSWER: Saint Peter (accept Simon, accept Simeon, accept Cephas)
Part 2: Saint Peter was eventually killed by Nero in this manner, only he was placed upside down. Pontius Pilate reluctantly ordered Jesus to be killed in this manner. ANSWER: crucifixion (accept being hung on the cross or other equivalents)

Part 3: Saint Peter denied being with Jesus at this location the night before his crucifixion. Jesus experienced the Agony in this location, where he said "the spirit is willing but the flesh is weak".

## ANSWER: Garden of Gethsemane

(Tossup 8) This structure is provided blood by the radicular arteries. Along with the brain, this structure is protected by the meninges. This structure's top is marked by the (*) pons and medulla oblongata. This structure controls reflexes such as the knee jerk. For ten points, name this structure that runs along the back and carries neural impulses from the brain to the body.

Answer: spinal cord (prompt on spine; prompt on central nervous system)
(Bonus 8) The opening and closing of these structures is regulated by guard cells, For ten points each.
Part 1: Name these pores found on the undersides of leaves that regulate the process of transpiration.
ANSWER: stomata (accept stomate)
Part 2: Transpiration through stomata is a form of gas exchange that releases this molecule, which is absorbed by roots from the soil.
ANSWER: water (accept $\mathbf{H}_{\mathbf{2}} \mathbf{O}$ )
Part 3: Water is conducted throughout the plant by this vascular tissue, which is often contrasted with the sugar-transporting phloem.
ANSWER: xylem

## Sixty-Second Round

The categories are...

1. 1950s
2. Charlie and the Chocolate Factory
3. Mass Extinction

The 1950s

Name the...

Part 1: The overseas conflict that included the US in Asia that occurred in the first four years of the decade
Answer: Korean War
Part 2: Russian satellite, the first artificial one in space, that flamed American fears in 1957 Answer: Sputnik 1

Part 3: Nationality of two Hispanic men who attempted to kill Harry Truman to give their homeland independence Answer: Puerto Rican [Accept Puerto Rico]

Part 4: Politician that ran both in 1952 and 1956 Presidential races, losing in landslides to Dwight D. Eisenhower
Answer: Adlai Stevenson II

Part 5: Nation, whose elected leader Jacobo Arbenz was overthrown in the US's Operation PBsuccess
Answer: Guatemala

Part 6: Computer scientist who helped develop the ENIAC computer successor UNIVAC; she was an early computer scientist
Answer: Grace Hopper

## Charlie and the Chocolate Factory

Identify the following people and things from the novel Charlie and the Chocolate Factory.

Part 1: The eccentric candymaker who invites Charlie and four other children to his chocolate factory.
Answer: Willy Wonka (accept either bolded name)
Part 2: The family member who takes Charlie to the factory.
Answer: Grandpa Joe (prompt on "Grandpa;" do not accept or prompt on "Grandpa George")
Part 3: The kind of treat that turns Violet violet when she fails to listen to the factory-owner's warnings.
Answer: Chewing gum (accept descriptions of gum that makes up a full meal)
Part 4: The object that Mike shrinks himself to go inside.
Answer: TV (accept television)
Part 5: The gluttonous child who is sucked up a pipe while drinking from a chocolate river. Answer: Augustus Gloop (accept either bolded name)

Part 6: The spoiled child who is pulled down a garbage chute by squirrels while trying to steal one.
Answer: Veruca Salt (accept either bolded name)

## Mass extinction

The mass extinction that occurred around 66 million years ago...

Part 1: Wiped out the non-avian type of which large land reptiles?
Answer: dinosaurs
Part 2: Paved the way for which class of animals to diversify rapidly into modern horses, whales, and primates?
Answer: mammals or mammalia
Part 3: Ended which era between the Paleozoic and Cenozoic, which was known as the "Age of Reptiles?"
Answer: Mesozoic
Part 4: Occured at the end of which period following the Jurassic?
Answer: Cretaceous
Part 5: Left a layer in the geologic record of what element which is common in asteroids? Answer: iridium

Part 6: Is explained by which hypothesis that was supported by the iridium layer and the Chicxulub impact crater?
Answer: Alvarez hypothesis

## Second Half

(Tossup 9) The concept of Seigniorage is the difference between the value of this item and the cost it takes to produce it. Ludwig von Mises explores the origin of this concept in the treatise (*) The Theory of [this concept] And Credit. The fiat form of this system refers to one not backed by a valuable resource like gold but instead backed solely by faith in its value. For ten points, name this item that can be exchanged for goods and service, or to pay back a debt.

## ANSWER: Money [Accept Currency]

(Bonus 9) One unratified portion of this document called the "Titles of Nobility Amendment" would strip citizens of noble titles by 1810. For ten points each:

Part 1: Name this document that enumerates how the US government should function, ratified by 12 of the 13 colonies by 1789 .
ANSWER: The Constitution
Part 2: The Constitution was largely written by this founding father.

## ANSWER: James Madison

Part 3: The ratification of the Constitution was pushed by The Federalist Papers, collectively written by John Jay, Madison, and Alexander Hamilton using this Latin derived pseudonym. ANSWER: Publius
(Tossup 10) This novel's protagonist is surprised when Aunt Alexandra brings her overalls after pulling her out of a chicken-wire ham costume that Sheriff Tate suggests saved her life. In this novel, Tom (*) Robinson's lawyer is targeted by Bob Ewell, who attacks Jem and his sister only to be killed by a reclusive resident of Maycomb, Alabama, Boo Radley. For ten points, name this novel by Harper Lee, narrated by Scout Finch.

## Answer: To Kill a Mockingbird

(Bonus 10) This narrative poem is part of a larger work that includes Purgatorio and Paradiso. For ten points each,

Part 1: Name this poem from the Divine Comedy in which Dante describes traveling through the nine circles of Hell with a Roman poet.
Answer: Inferno
Part 2: In the Inferno, Dante is accompanied through Hell by this real-life Roman poet, who wrote the Aeneid.
Answer: Virgil
Part 3: In the second circle of Hell, Virgil and Dante meet Paolo and Francesca da Rimini, who are being punished for this cardinal sin. In the poem, their souls are blown toward and away form each other by strong winds to mimic the passions of this sin.
Answer: lust (accept lechery; accept carnal)
(Tossup 11) This country's first emperor was Agustín de Iturbide. This country's second empire's only ruler was Maximilian I, the brother of Franz Joseph I (*) of Austria. Forces from this country under Porfirio Diaz defeated French invaders at the Battle of Puebla. For ten points, name this North American country whose other leaders include Vicente Fox and Antonio López de Santa Anna.

## Answer: Mexico

(Bonus 11) A Mandinka epic about this empire's founder is preserved orally through griots. For ten points each,

Part 1: Name this empire founded by Sundiata Keita. This empire, which was established after the Battle of Kirina, was originally based around a set of towns known as the "Twelve Doors."

## Answer: Mali Empire

Part 2: This wealthy ruler of the Mali Empire was one of the richest people of all time. According to legend, this man caused a recession when he went on a pilgrimage to Mecca because he gave away so much gold.
Answer: Mansa Musa I

Part 3: This empire succeeded the Mali Empire under the reign of Sonni Ali. This empire, whose capital was Gao, was governed by Askia Muhammad I.
Answer: Songhai Empire
(Tossup 12) One god of this domain married his sister Mama Killa and was the son of Viracocha. Another god of this domain was lured out of a cave by her own reflection. This domain of Inti is (*) pursued by the wolf Skoll in Norse myth. The Aztecs worshipped five gods of this domain, and they performed blood sacrifice to ensure its continued existence. This is the domain of the Shinto god Amaterasu. Phaethon died after losing control of this domain's chariot. For ten points, name this celestial domain of Helios.
ANSWER: The sun
(Bonus 12) Inhabitants of this location may have drunk from the River Lethe before entering, causing them to lose their identities. For ten points each,

Part 1: Name this nondescript location of the Greek underworld. This region was preferable to the Mourning Fields, but the souls here were not good enough to enter the Isles of the Blessed. ANSWER: Asphodel Meadows (accept Asphodel Fields)

Part 2: This hero tried to retrieve his wife Eurydice from the underworld after her premature death. This musician ruined his chance by looking back at her before they reached the surface. ANSWER: Orpheus

Part 3: This underworld abyss was reserved for the worst mortals. Sisyphus perpetually rolls a boulder up a hill in this place, and Tantalus ended up here after feeding his son to the gods.

## ANSWER: Tartarus

(Tossup 13) This quantity squared divides velocity squared in the formula for the Lorentz factor. The Michelson-Morley experiment attempted to find differences in this quantity using an interferometer (*), but found it was constant. In a vacuum, the frequency of an electromagnetic wave multiplied by its wavelength gives this quantity. Energy is equal to this constant times the speed of light squared, and it is symbolized with a c. Equal to approximately 300 million meters per second in a vacuum, For ten points, name this fastest speed in the universe.

Answer: speed of light
(Bonus 13) Industrial petroleum refineries often make use of the "fractional" type of this process, For ten points each.

Part 1: Name this technique used to separate mixtures based on their boiling points. ANSWER: distillation (accept fractional distillation)

Part 2: Refluxing uses repeated cycles of boiling and this process to increase the purity of distillation. This process occurs when a gas is converted into a liquid.
ANSWER: condensation (accept condensing)
Part 3: This term refers to mixtures that cannot be separated by distillation, such as a $96 \%$ solution of ethanol and water.
ANSWER: azeotropes
(Tossup 14) A poem by this man declared "Liberty's in every blow! / Let us do or die!" and called on warriors "wham Bruce has aften led" while invoking a national hero. This poet asked "should (*) auld acquaintance be forgot?" and wrote "the best laid schemes o' mice and men / gang aft agley" using Scots-language phrases. For ten points, name this Scottish Romantic poet of "Scots Wha Hae Wi' Wallace Bled," "Auld Lang Syne," and "To a Mouse."

Answer: Robert Burns (accept Rabbie Burns)
(Bonus 14) This author wrote a poem in which an abusive English soldier finally admits that a water-bearer is "a better man than I am." For ten points each,

Part 1: Name this English poet who wrote "Gunga Din" and children's adventure novels like Kim. Answer: Rudyard Kipling (accept Joseph Rudyard Kipling)

Part 2: Kipling was born in Mumbai during the British Raj in what is now this country, where many of his works are set.
Answer: India (accept Republic of India; accept Bharat Ganarajya)
Part 3: This poem by Kipling encourages his son to "keep your head when all about you / are losing theirs," and concludes that by doing so, "you'll be a Man, my son."
Answer: If-
(Tossup 15) The "barrier" type of these features most often form as a result of breaking off of a spit. Chains of the "volcanic" type of these features can be created by the increased volcanism of hot spots. Small kinds of these features made of (*) coral are called atolls. Large groups of these features are called archipelagos. For ten points, name these masses of land that are surrounded on all sides by water.

Answer: Islands (accept archipelagos)
(Bonus 15) This organism often comes in stony and soft forms, differentiated by the existence of an exoskeleton. For ten points each:

Part 1: Name these Cnidaria that create compact colonies known as Reefs.
ANSWER: Corals

Part 2: A coral gets its bright colors these dinoflagellates, largely in the family Symbiodiniaceae, that live symbiotically with coral.
ANSWER: Zooxanthellae

Part 3: Mass ejection of Zooxanthellae and other algae, in part due to chemical imbalances or other environmental pressures, elad to this process of the coral losing its color and dying.
ANSWER: Coral Bleaching
(Tossup 16) Hilbert's paradox of the Grand Hotel demonstrates properties of sets with this cardinality. Representations of this value include aleph-null and omega, which is countable. This value is the (*) surface area of a Menger sponge and the perimeter of a Koch snowflake. This value is the sum of the harmonic series. The function one over x approaches this value as $x$ approaches zero from the positive side. For 10 points, name this value that is the number of real numbers.

## ANSWER: infinity

(Bonus 16) These seven problems were stated by the Clay Mathematics Institute and solving one results in a million dollar prize. For 10 points each:

Part 1: Name these problems that include $P$ versus NP and the Poincare conjecture. ANSWER: Millennium Prize Problems

Part 2: This unsolved Millennium Prize problem is about the "zeta function" of its namesake mathematician. This hypothesis concerns the distribution of prime numbers.
ANSWER: Riemann hypothesis

Part 3: The Riemann hypothesis states that all nontrivial zeros of the zeta function's continuation would have a real part of this value. The area of a triangle is its base times height times this number.
ANSWER: one-half

## Tiebreaker

(Tossup 17) "Pied Noir" Louis Althusser wrote a work titled for this philosopher that splits him into his young, Hegelian self and his older, more-weathered self. This figure pushed
for the abolition of religion, describing it as the (*) "Opium of the Masses." During his exile in Switzerland, Vladimir Lenin wrote a Short Sketch of this thinker that influenced him. For ten points, name this German writer of Capital and The Communist Manifesto.

## Answer: Karl Marx

(Bonus 17) The Nine Years' War forced this composer to leave his post at the Stuttgart Church and flee to Gotha. For ten points each:

Part 1: Name this German Baroque composer whose namesake Canon in D is often used at weddings in the western world
ANSWER: Johann Pachelbel

Part 2: Pachelbel primarily played this keyboard instrument with pipes, often seen in Medieval and Renaissance Catholic Churches. ANSWER: Organ

Part 3: Pachelbel wrote many of these pieces whose name comes from the Italian word from "to touch." When paired with "Fugue," it names organ music written by Johann Sebastien Bach.

