

RQBCo Novice 2025-2026

powered by

TheRockfordQuizBowlCo.

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Round 10

- 1) In an "anvil cell," material is crushed between the polished tips of these objects at incredibly high pressures. Experiments using anvil cells have shown that methane can be crushed into these objects, as observed in "rain" on (*) Neptune. Drill bits may be coated with a grit of these objects, which are entirely made of carbon. The highest value of ten on the Mohs scale of hardness is defined by, for ten points, what mineral used in valuable jewelry?

ANSWER: diamonds (accept diamond anvil cell; accept diamond rain)

Bonus 1) Novels by this author concern the struggles of former slaves like Sethe and Black girls who are tragically obsessed with white features like Pecola Breedlove. For ten points each,

[10h] Name this American author who also wrote the novels *Tar Baby* and *Song of Solomon*.

ANSWER: Toni Morrison (accept Chloe Anthony Wofford Morrison; accept Chloe Ardelia Wofford)

[10m] In this novel by Toni Morrison, Sethe is haunted by the memory of the daughter that she killed to save from slavery.

ANSWER: Beloved

[10e] Pecola Breedlove is obsessed with white beauty standards in a Toni Morrison novel titled for this color of eye that is brighter than brown or green.

ANSWER: blue (accept The Bluest Eye)

- 2) **Abigail Adams watched this battle from Penn's Hill at a namesake "Cairn." Thomas Gage was dismissed following this battle. One commander in this battle legendarily told soldiers not to fire "until you see the (*) whites of their eyes."** The nearby Breed's Hill was the subject of most of the fighting at, for ten points, what Revolutionary War battle outside Boston, a Pyrrhic victory for Britain?

ANSWER: **Bunker Hill** (accept Battle of **Bunker Hill**; accept Battle of **Breed's Hill** before it is read in the last sentence)

Bonus 2) A stainless steel sculpture of these flowers by Jeff Koons sits outside the Guggenheim art museum in Bilbao, Spain. For ten points each,

[10h] Name this type of flower represented as brightly-colored steel tubes on long stems.

ANSWER: **tulip** (accept **Tulips**)

[10e] Another Koons sculpture outside the Guggenheim Bilbao is a flower-growing trellis shaped to look like one of these animals, a baby dog.

ANSWER: **Puppy**

[10m] Koons's signature artwork is a stainless steel dog that is shaped to look like it is made out of this material. A painting by Banksy of a girl holding one of these things shredded itself at auction in 2018.

ANSWER: **balloon** (accept **Balloon Dog**; accept **Girl with Balloon** or **Balloon Girl**)

- 3) **An author conducting a survey of these people who had attended Smith College turned the results into a 1963 philosophical text about the *Mystique* of these people. A 1949 book about these people notes that "one is not (*) born, but rather becomes," one of them. Betty Friedan helped begin the second wave of a movement seeking better treatment of, for ten points, what type of person also discussed in Simone de Beauvoir's *The Second Sex*, a key feminist work?**

ANSWER: **women** (accept equivalents like **girls** or **females**; accept The **Feminine** *Mystique*)

Bonus 3) This principle may come into play if a system has its temperature, volume, or pressure changed, or by adding or subtracting the components of the reaction. For ten points each,

[10h] Name this principle from chemistry, named for a French chemist. This principle explains that, in a system at equilibrium, a shift in the system will cause an adjustment back to an equilibrium.

ANSWER: Le Chatelier's principle [le SHAH-teh-lee-AY's principle]

[10m] The behavior predicted by Le Chatelier's principle is not affected by this type of chemical, which speeds up or slows down a reaction without being consumed in the reaction.

ANSWER: catalyst

[10e] In a school lab, Le Chatelier's principle may be taught by observing how heat can cause a color change in a complex of starch and this halogen element with atomic symbol I ["eye"].

ANSWER: iodine

- 4) **This is the surname of a poet who wrote about the painter Frà Pandolf igniting a heart "too soon made glad." Another writer with this last name wrote "Yes, call me by my pet-name" in the collection *Sonnets from the (*) Portuguese*, which also contains a poem that asks, "How do I love thee? Let me count the ways." "My Last Duchess" is by a poet with this last name. For ten points, give the shared surname of the married poets Robert and Elizabeth Barrett.**

ANSWER: the Brownings (accept Robert and/or Elizabeth Barrett Browning)

Bonus 4) New York Harbor has three prominent islands just south of Manhattan Island. For ten points each,

[10e] Name the gift from France that sits on the smallest of the three islands. This green, copper-plated monument has overlooked the harbor since 1886.

ANSWER: Statue of Liberty (accept Liberty Enlightening the World)

[10m] This island processed more than ten million immigrants to America in the early twentieth century.

ANSWER: Ellis Island

[10h] The largest of the three islands, Governors Island, is home to a star fort named for this Founding Father. This man negotiated a controversial 1794 treaty with Great Britain that was primarily written by Alexander Hamilton.

ANSWER: John Jay (accept Fort Jay; accept Jay's Treaty)

- 5) **A painting titled for a curving one of these natural features by Thomas Cole depicts a passing thunderstorm in Massachusetts. That painting, *The Oxbow*, is from an artistic "school" named for the Hudson, one of these natural features. Emmanuel Leutze painted George (*) Washington during the crossing of one of these natural features. The Delaware is an example of, for ten points, what natural features of flowing water?**

ANSWER: **rivers** (accept Hudson **River** School, accept Delaware **River**)

Bonus 5) The largest island of Canada is not Ellesmere Island... not that Google Maps will help you figure that out. For ten points each,

[10m] Ellesmere Island's size is greatly exaggerated because Google Maps uses a variant of this rectangular map projection, named for a Flemish geographer. This projection inflates land areas that are far away from the equator.

ANSWER: **Mercator** projection (accept **Web Mercator** projection)

[10e] This large Danish territory northeast of Canada is the most common example of Mercator distortion. This island was named as a marketing gimmick by Erik the Red.

ANSWER: **Greenland** (accept **Kalaallit Nunaat**)

[10h] Name the actual largest island of Canada. This fifth largest island in the world, found between Greenland and Hudson Bay, is two-and-a-half times larger than Ellesmere to its north.

ANSWER: **Baffin** Island (accept **Qikiqtaaluk**)

- 6) **This holiday is celebrated in the month of Kislev, when participants in this holiday sing Ma'oz Tzur to remember four persecutions. This holiday commemorates the Maccabean Revolt, when supplies at the (*) Temple in Jerusalem lasted longer than expected. This holiday celebrates the Miracle of the Oil with latke and other fried foods, and by lighting a menorah with nine branches. For ten points, name this festival of lights, a winter holiday in Judaism.**

ANSWER: **Hanukkah** (accept **Chanukah**; prompt on "Festival of Lights" before it is read in the last sentence)

Bonus 6) Answer the following about games with questionably relevant names, for ten points each.

[10e] The only reason that this swimming pool-centric version of tag is named for a medieval Venetian explorer of China is that his first and last name make a great call-and-response pair.

ANSWER: **Marco Polo** (be lenient and prompt on "Polo" alone, even though "polo" is a very different game)

[10h] In this alternate rule set for Twenty Questions, players try to guess which famous person is being thought of. This game is named for the Italian artist of *The Birth of Venus*, because by rule, the target must be at least as famous as he is.

ANSWER: **Botticelli** (accept Sandro **Botticelli**)

[10m] This RPG video game series by Square Enix has sixteen numbered entries and plenty more spinoffs, remakes, and tie-ins to *Kingdom Hearts*, despite its title clearly indicating it should have stopped at one game.

ANSWER: **Final Fantasy**

- 7) **A long digression in this novel describes the convent at Petit-Picpus, where Monsieur Madeleine pretends to be the brother of Fauchelevent [foh-sheh-leh-VON], whom Madeleine had saved from being crushed under a cart. A man in this novel flees from (*) Javert [jah-VAYR] while carrying Fantine's daughter, Cosette, whose fiancé he saves at a barricade during the June Rebellion in Paris. For ten points, name this novel by Victor Hugo about Jean Valjean, a virtuous convict, which became a notable musical.**

ANSWER: Les **Misérables** (prompt on "Les Mis")

Bonus 7) Sundiata Keita founded this empire, according to an epic passed down through oral storytelling. For ten points each,

[10h] Name this empire that controlled much of sub-Saharan West Africa from the thirteenth to seventeenth centuries. As with many important African empires, it shares its name with a modern-day country.

ANSWER: **Mali** Empire

[10m] The Mali Empire had several religious traditions among its people, but the most prominent faith was this religion, followed by its ruler Mansa Musa.

ANSWER: **Islam** (accept **Muslim**)

[10e] During his hajj to Mecca, Mansa Musa crashed several local economies with his lavish spending of this valuable metal, which the Mali Empire traded for salt and copper.

ANSWER: **gold**

- 8) **This operation is found in the denominator of each coefficient in a Taylor series. The number e is equal to an infinite sum of one over this operation of n. The formula for combinations features this operation three times. The number of ways to (*) rank four teams is equal to this operation on the number four, which would be computed as "four times three times two times one."** For ten points, name this operation symbolized with an exclamation point.

ANSWER: **factorial**

Bonus 8) A trumpeter playing one steady note out of the passenger window of a car will not sound like they're playing the same note to anyone that they pass along the way. For ten points each,

[10m] Name this physical effect in which a wave's frequency is changed by the apparent motion of the source of the wave.

ANSWER: **Doppler** effect

[10e] In astronomy, the Doppler effect applies to the wavelength of photons emitted by stars. If a star is moving toward Earth, the Doppler effect creates a blueshift in the light waves; if the star is moving away from Earth, the Doppler effect creates this color shift instead.

ANSWER: **red**shift

[10h] In medicine, the Doppler effect is exploited when using this ultrasound technique to visualize the heart. This technique should not be confused with the similarly named electro·cardio·graph, which uses electricity instead.

ANSWER: **echocardiograph** (accept word forms like **echocardiography**; accept cardiac **echo**; accept **echo**cardiogram, the name of the image made by the technique; do not accept or prompt on "ECG" or "EKG," as those stand for electrocardiograph)

- 9) **This ruler opposed the death penalty in an Enlightenment-inspired law code called the Nakaz, written with advice from Grigory Orlov and Voltaire. Another advisor of this ruler, Grigori (*) Potemkin, was said to have built fake villages to impress her. Pugachev's Rebellion opposed this enlightened despot, who came to power in 1762 after the overthrow of Peter the Third, her husband. For ten points, name this "Great" eighteenth century Empress of Russia.**

ANSWER: **Catherine** the Great (accept **Catherine** II; accept **Yekaterina** II; accept **Yekaterina** Alexeeva; accept **Yekaterina** Belkava; accept **Sophie of Anhalt-Zerbst**; accept **Sophie Friederike Auguste**; prompt on "Sophie")

Bonus 9) This empire venerated its legendary founder, Manco Capac, as the descendent of the creator god, Viracocha. For ten points each,

[10m] Name this South American empire whose capital, Cusco, is in modern Peru.

ANSWER: Inca (accept Incan Empire)

[10e] Manco Capac was sometimes described as the child of Viracocha or as the child of Inti, the god of this star that warms the Earth.

ANSWER: the Sun

[10h] In yet another version of the story, Inti pulled Manco Capac out of this lake high in the Andes, on the border of Peru and Bolivia.

ANSWER: Lake Titicaca

- 10) **These structures detect gravity with the columella cells in their "caps," and they grow from the radicle of a seed. Mangroves use the "aerial" form of these structures for aeration. These plant structures can form (*) mycorrhizae in a symbiotic relationship with fungi. The "tap" form of these plant structures can store nutrients, as in parsnips and carrots. For ten points, name these plant structures that anchor a plant and take in water from the soil.**

ANSWER: root (accept aerial roots; accept taproots)

Bonus 10) Answer the following about author Rabindranath Tagore [ra-BIN-dra-nath ta-GORE], for ten points each.

[10m] Tagore was from this country, and wrote in its language of Bengali.

ANSWER: India (accept Republic of India; accept Bharat Ganarajya)

[10e] Tagore wrote several of these official patriotic musical compositions, such as Bangladesh's "Amar Sonar Banglar" and India's "Jana Gana Mana."

ANSWER: national anthems

[10h] Tagore's collection *Gitanjali* [gee-tahn-jah-lee] featured a preface by this author in its English translation. This Irish poet, often compared with Tagore, wrote "The Second Coming."

ANSWER: William Butler Yeats (accept W. B. Yeats)

- 11) **This god was trapped in a jar for thirteen months by Ephialtes [eh-fee-AL-tees] and Otus before Artemis rescued him. After killing a dragon sacred to this god, Cadmus served this god for eight years. During the Trojan War, Diomedes was assisted by (*) Athena in stabbing this god, who was often accompanied by his children Phobos and Deimos. Hephaestus used a net to trap this god and expose his affair with Aphrodite. For ten points, name this Greek god of war.**

ANSWER: Ares (do not accept or prompt on Mars)

Bonus 11) Using a ninety-degree rotation and a special filter on the most famous example of these images creates a ghostly resemblance to the Buddha, called Buddhabrot. For ten points each,

[10m] Name these geometric shapes that feature interesting structures at intense levels of zoom, often appearing self-similar. The Koch snowflake ["coke snowflake"] and Sierpinski triangle are examples of these images.

ANSWER: fractals

[10e] The Buddhabrot is a modification of the Mandelbrot set, a set of these numbers that include both real and imaginary parts.

ANSWER: complex numbers

[10h] The Mandelbrot set and other fractals were first imaged at this company's Watson Research Center, where Mandelbrot was able to use computing time in the 1980s. SQL ["sequel"], the bar code, and the magnetic stripe used in credit cards were each invented at this computing company.

ANSWER: IBM (accept International Business Machines Corporation)

- 12) **These devices were used to cool rubidium atoms for the first observed Bose-Einstein condensate. These devices work by creating a population inversion, in which more particles exist in an excited state than in the ground state, allowing for (*) light amplification. Ruby crystals were used in early examples of these devices, which today are used in LIDAR and fiber optics. For ten points, name these devices that emit a beam of coherent light.**

ANSWER: lasers (accept light amplification by stimulated emission of radiation)

Bonus 12) In the 1346 Battle of Crécy [k-ray-SEE], English and Welsh troops fired hundreds of thousands of arrows using these weapons. For ten points each,

[10m] Name this ranged weapon that provided a range and speed advantage over the opposing French crossbowmen.

ANSWER: longbow (prompt on "bow;" prompt on "bow and arrow")

[10e] The Battle of Crécy directly led to English control of the French port of Calais [ka-LAY] during this war, which lasted well over a century.

ANSWER: Hundred Years' War

[10h] Crécy was the culmination of an English romp through French farmlands that began with a naval landing in this French duchy. Today, this region is best known as the landing site for another naval operation on June 6, 1944.

ANSWER: Normandy

- 13) **Restrictions against immigration of these people to the United States were lifted by the Burlingame Treaty in 1868, then brought back by President Arthur in 1882 with a namesake Exclusion Act. The Transcontinental (*) Railroad was built with labor from over ten thousand people of this ethnicity, whose emigration created a large neighborhood in San Francisco. For ten points, name this Asian ethnicity whose American immigrants sailed from cities like Beijing.**

ANSWER: Chinese-Americans (prompt on "Asian" or "Asian-Americans" before "Asian" is read in the last sentence)

Bonus 13) One of the defining moments of English Romantic poetry was the publication of *Lyrical Ballads*, a collection by William Wordsworth and this poet. For ten points each,

[10h] Name this poet who wrote "Kubla Khan" and a poem whose narrator complains that there is "Water, water, every where, / Nor any drop to drink."

ANSWER: Samuel Taylor Coleridge

[10m] The title character complains of having no water to drink at sea in a poem named for "The Rime of" an ancient one of these people.

ANSWER: mariner (accept sailor; accept The Rime of the Ancient Mariner)

[10e] In the poem, the Mariner tells his story to a guest on their way to one of these events. At the end of the poem, the guest is "turned from the bridegroom's door" because they are too late to attend this event.

ANSWER: wedding (accept marriage ceremony)

- 14) **In this country, the Guri Dam creates a water reservoir the size of Rhode Island, just south of the Orinoco River. This country's name is believed to have been inspired by stilt houses on its Lake (*) Maracaibo that reminded Amerigo Vespucci of an Italian city. This mainland country's coast is just south of the islands of Trinidad, Tobago, and Aruba. For ten points, name this South American country whose capital of Caracas lies on the Caribbean coast.**

ANSWER: Venezuela (accept Bolivarian Republic of Venezuela)

Bonus 14) This composer wrote many lieder [LEE-dur], art songs that tell a story and that are often based on poetry. For ten points each,

[10h] Name this composer who wrote "Erlkönig" [URL-kuh-nig], "Gretchen at the Spinning Wheel," and the song cycle *Death and the Maiden*.

ANSWER: Franz Schubert (accept Franz Peter Schubert)

[10m] Schubert also wrote other kinds of works; he adapted his lied [leed] "Die Forelle" into "Trout," a work for this number of performers. Beethoven's symphony of this number has a short-short-short-long motif.

ANSWER: five (accept Trout Quintet; accept Forellequintett)

[10e] Schubert also wrote symphonies. Although he did write a ninth symphony, Schubert's eighth symphony is given this nickname, since he only ever completed two of its movements.

ANSWER: unfinished

- 15) **A short story with this term in its title compares people of this type with "two foolish children in a flat," one of whom sells her most prized possession to Madame Sofronie. These people "invented the art of giving (*) Christmas presents" in a story about Jim and Della, who sell their hair and watch to buy combs and a watch-chain. An O Henry short story is named "The Gift of," for ten points, what wise men who legendarily brought gifts to the baby Jesus?**

ANSWER: Magi (accept The Gift of the Magi; prompt on "wise men" before it is read in the last sentence)

Bonus 15) Milton Friedman led a school of economic thought from the University of Chicago that focused on the supply of this quantity in circulation. For ten points each,

[10m] Name this basic economic commodity that encompasses paper cash, coins, other currency, and the numbers on bank balance sheets.

ANSWER: money (accept monetarism and word forms; accept money supply)

[10h] In *The General Theory of Employment, Interest, and Money*, this twentieth century British economist explained the benefits of government spending. Broadly speaking, Milton Friedman's monetarists opposed this man's thinking.

ANSWER: John Maynard Keynes [canes]

[10e] Friedman worried that Keynesian spending would lead to this economic phenomenon, the general rise of prices over time.

ANSWER: inflation

- 16) **Conspiracy theorists believe that an executive in this city, Nico Harrison, was promised the rights to Cooper Flagg before he traded away his team's best player. In 2025, another team in this city let Jerry Jones ruin contract negotiations with an edge rusher who was then sent to (*) Green Bay.** The stunning trades of Luka Dončić [loo-ka don-chich] and Micah Parsons aggravated hometown fans in, for ten points, what Texas city where you could watch the Mavericks and Cowboys?

ANSWER: Dallas (accept Dallas Mavericks; accept Dallas Cowboys)

Note: The editing team does not recommend watching the Mavericks or Cowboys.

Bonus 16) Answer the following about a certain object's 2006 "demotion" to a dwarf planet. For ten points each,

[10e] This dwarf planet was classified as the ninth planet from the Sun until the IAU changed their definition. Its largest moon is Charon.

ANSWER: Pluto (accept 134340)

[10m] Pluto resides in this region, a large disc in the outer solar system named for a Dutch astronomer.

ANSWER: Kuiper belt [KYE-per "belt"] (accept Edgeworth-Kuiper belt)

[10h] This discovery of this scattered-disc object within the Kuiper belt helped lead to Pluto's demotion. This object, whose only known moon is Dysnomia, is named for the Greek god of strife and discord.

ANSWER: Eris (accept 136199)

- 17) A Charlatan brings puppets to life in this composer's ballet *Petrushka*. This composer's debut ballet preceded a suite featuring an "Infernal Dance." The Ballet Russes' Paris seasons featured this man's works, one of which has a high (*) bassoon solo and incited riots. That ballet ends with a character performing until she dies in a "Sacrificial Dance." For ten points, name this Russian composer of *The Firebird* and *The Rite of Spring*.

ANSWER: Igor Stravinsky (accept Igor Fyodorovich Stravinsky)

Bonus 17) The first of these laws closed the Port of Boston, an act seen as punishing the many for the acts of the few. For ten points each,

[10m] Name this set of laws that was passed by Parliament in 1774 as retribution for the Boston Tea Party.

ANSWER: Intolerable Acts (accept Coercive Acts; accept Insufferable Acts)

[10e] The second of the Intolerable Acts revoked the charter of this home colony of Boston.

ANSWER: Massachusetts (accept Province of Massachusetts Bay; accept Massachusetts Bay Colony)

[10h] Another of the Intolerable Acts applied new rules for this practice to all of America, not just Boston. The Third Amendment to the Constitution forbids this practice in peacetime without the consent of the homeowner.

ANSWER: quartering (accept descriptions of "providing housing to soldiers;" prompt on "housing" and other partial descriptions by asking, "What kind of person is being housed?")

- 18) In a play by this writer, Pheidippides [fay-ih-DIH-pih-dees] is infuriated when his father, Strepsiades [strep-SYE-ah-dees], joins the Thinkery to learn to argue. In another play by this writer, Xanthias [ZAN-thee-us] walks around a lake while his employer, Dionysus, is infuriated by a chorus that chants (*) "bre-ke-ke-kex ko-ax ko-ax." A title character created by this author leads women in a strike against their husbands to end the Peloponnesian War. For ten points, name this ancient Greek playwright of comedies like *The Clouds*, *The Frogs*, and *Lysistrata*.

ANSWER: Aristophanes

Bonus 18) This city is characterized as a sex worker dressed in red and purple and riding an undead beast with seven heads and ten horns. For ten points each,

[10h] Name this wealthy city that, in a first-century work credited to John of Patmos, is destroyed during the end times.

ANSWER: **Babylon** (accept **Babylon** the Great; accept the Fall of **Babylon**; accept Whore of **Babylon**)

[10m] John describes his vision of the Fall of Babylon after he sees a vision of demons gathering for an apocalyptic battle at this location, whose name is now a synonym for the end of the world.

ANSWER: **Armageddon** (accept **Harmagedon** or **Harmagedo**; accept **Megiddo**)

[10e] John recorded his visions of Armageddon and the Last Judgement in this final book of the Christian Bible.

ANSWER: **Revelation** (accept Book of **Revelation**; listen carefully: do not accept or prompt on "Revelations")

- 19) Cementite [**"cement"-ite**] is a compound of about seven percent carbon and ninety-three percent this element. Oxides of this element include magnetite and hematite, the latter of which gives color to (*) red ochre [**OH-ker**]. The Bessemer process purifies this element to create an alloy of carbon and this element, which is "cast" to make cooking pans. For ten points, name this element, found with carbon in steel, whose chemical symbol is Fe.

ANSWER: **iron** (accept **Fe** before it is read)

Bonus 19) In this Edgar Allan Poe short story, the narrator is obsessed with his housemate's "vulture-eye," so he kills him and buries his body under the floorboards. For ten points each,

[10e] Name this story in which the narrator reveals his crime to the police because he thinks he hears his victim's still-beating title organ.

ANSWER: The **Tell-Tale Heart**

[10h] In this Poe short story, the narrator kills his wife and plasters her body into his basement wall, but the police discover his crime when they hear the call of Pluto, the title pet.

ANSWER: The **Black Cat**

[10m] Montresor, the narrator and murderer of another Poe story, bricks Fortunato up in the cellar of his home after luring him in with the promise of a cask of this title wine. Unlike in the other two stories, Montresor gets away with his crime.

ANSWER: **Amontillado** (accept The **Cask of Amontillado**)

- 20) **This country's economists included the "Chicago Boys," who also influenced the rest of South America. On September 11, 1973, this country's president supposedly used a gold-plated A-K-47 [A K forty-seven] to commit suicide amidst the capture of La (*) Moneda, his presidential palace. Dictator Augusto Pinochet [PEE-noh-shay] led this country after the fall of Salvador Allende [ah-YEN-day]. For ten points, name this coastal South American country led from Santiago.**

ANSWER: Chile (accept Republic of Chile; accept República de Chile)

Bonus 20) This process can be triggered by the release of cytochrome c. For ten points each,

[10h] Name this process of programmed cell death.

ANSWER: apoptosis

[10e] Cytochrome c is released from these organelles, nicknamed the "powerhouse of the cell."

ANSWER: mitochondria (accept mitochondrion)

[10m] The compound p-53 triggers apoptosis in response to damage to this double helix polymer that is stored in the nucleus of a cell.

ANSWER: DNA (accept deoxyribonucleic acid)