

## Round 9

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### Tossups

(1) **These objects collect and deposit debris in masses called moraines. These objects can move via basal sliding, which occurs when (\*)** meltwater reduces ground friction. The Great Lakes were formed from the retreat of these objects. About seventy percent of Earth's freshwater is stored in, for ten points, what large sheets of land-based ice?

ANSWER: glaciers (accept additional information, like alpine glaciers)

(2) **Congressman Charles Wilson pushed to covertly supply this country with Stinger missiles in Operation Cyclone. An ill-fated 1979 Soviet invasion of this country was countered by its mujahideen [moo-jah-hih-deen]. In the wake of the (\*)** September 11th attacks, a US-led NATO coalition invaded, for ten points, what country that was liberated by the 2001 ousting of the Taliban from its capital, Kabul?

ANSWER: Islamic Republic of Afghanistan

(3) **One of these mythical figures was rescued from a ring of fire by Siegfried, who cut off her armor. (\*)** Brunhilde was one of these daughters of Odin, who were often described as "shield-maidens." For ten points, name these divine women who, in Germanic mythology, carried the souls of dead warriors to the afterlife.

ANSWER: Valkyries (accept shield-maiden before it is read)

(4) **The first of these materials used by humans was meteoric iron, predating the invention of smelting. These materials commonly exhibit better strength than their (\*)** components. Adding chromium to iron makes one of these materials called stainless steel, and examples of these made with copper include bronze and brass. For ten points, give this term for a mixture of two or more metals.

ANSWER: alloy (prompt on "metal" or "mixture")

(5) **This novel's epilogue speculates that this book's narrator may have made use of Mayday's Underground Femaleroad. This novel's protagonist butts heads with Serena Joy, the wife of a (\*)** Commander who plays Scrabble with a woman despite the laws of the Republic of Gilead. For ten points, name this novel by Margaret Atwood about Offred, a woman who has been forced to be the title child-bearing slave.

ANSWER: The Handmaid's Tale

(6) **Edward Elgar’s last notable work is a concerto for this instrument, which was played by Jacqueline du Pré [pray] and Mstislav Rostropovich [MISS-ti-slav ross-troh-poh-vich]. Bach composed six solo suites for this instrument, the first of which is a signature piece for (\*) Yo-Yo Ma. For ten points, name this large string instrument that is smaller than a bass and much larger than a viola.**

ANSWER: violoncello

(7) **Thinkers in this field of study were discouraged from using “infinitesimals,” quantities too small to be measured, until Gottfried Leibniz and Isaac Newton independently developed it in the 17th century. (\*) Integrals and derivatives are taught in, for ten points, what branch of math that is often taught as an advanced class in high schools?**

ANSWER: calculus (prompt on “math” before it is read)

(8) **This philosophy, which teaches that true happiness comes from virtue, was promoted in the *Meditations* of Marcus Aurelius. Zeno of Citium founded this school of philosophy, whose core idea is that people should not be (\*) swayed by desire or fear. For ten points, name this ancient philosophy whose name is, today, associated with being calm and unemotional.**

ANSWER: Stoicism (accept word forms like Stoic)

(9) **One of these literary works describes the publication of the author’s novel *The Tale of Genji* and criticizes a court rival for her ineffective poetry. Lists of “depressing” and “hateful” things fill out one of these books, and another contains (\*) first-hand accounts of historical events like the birth of emperor Go-Ichijo. Lady Murasaki and Sei Shonagon wrote, for ten points, what kind of books that keep a record of daily life?**

ANSWER: diary (accept journal or memoir or other descriptions of daily logs; accept The Pillow Book of Sei Shonagon; accept Makura no Soushi; accept Diary of Murasaki Shikibu; accept nikki; accept zuihitsu)

(10) **This man lamented “It is well that war is so terrible, or we should grow too fond of it” during his victory over Ambrose Burnside at the Battle of Fredericksburg. This man, who led the militia that ended John (\*) Brown’s raid, was victorious at the Second Battle of Bull Run. For ten points, name this general who, on April 9th, 1865, surrendered his Confederate army at Appomattox to Ulysses S. Grant.**

ANSWER: Robert E. Lee (accept Robert Edward Lee)

(11) **This architect created two studios named Taliesin, and his Robie House exemplifies the Prairie School of architecture founded by this man. This architect created the New York (\*) Guggenheim Museum, and used cantilevers to support the concrete terraces of a house in Pennsylvania over a waterfall. For ten points, name this American architect of Fallingwater.**

ANSWER: Frank Lloyd Wright

(12) **This organ contains masses of lymphatic tissue known as Peyer’s patches. This organ’s surface area is increased by fingerlike villi that can be blunted by celiac disease. This organ, which receives chyme through the pyloric (\*) sphincter, consists of the ileum, jejunum, and duodenum.** For ten points, name this digestive organ that is found between the stomach and a related, larger organ.

ANSWER: small intestine (accept small bowel; prompt on “intestine(s)”)

(13) **In a story by this author, Johnny Dorset terrorizes Bill and Sam until they pay his father to take him back. This author of “The Ransom of Red Chief” wrote a short story in which (\*) Jim buys his wife combs and Della buys Jim a watch-chain, only to discover that they have sold their watch and hair.** For ten points, name this American writer of short stories with twist endings, like “The Gift of the Magi.”

ANSWER: O. Henry (accept William Sydney Porter)

(14) **In 2018, this state’s Democratic candidate for governor, Andrew Gillum, lost by fewer than thirty-five thousand votes after a machine recount. The Supreme Court awarded this state’s twenty-five electoral votes to George W. Bush in 2000 after stopping a (\*) recount in counties like Broward and Palm Beach.** For ten points, name this southern US state where governor Ron DeSantis leads from Tallahassee.

ANSWER: Florida

(15) **This game’s 1972 World Championship was lost by Boris Spassky. In 1999, a team of fifty thousand people voted to use the Sicilian Defense in this game’s “Kasparov versus the World” match. (\*) Bobby Fischer was a Grandmaster in this game, whose current world champion is Magnus Carlsen.** For ten points, name this board game in which players must protect their king from pieces like knights, rooks, and pawns.

ANSWER: chess

(16) **According to legend, this man filled a room with fake flowers in order to confuse the Queen of Sheba. In another story, this son of (\*) Bathsheba threatened to cut a baby in half to determine which of two women was the child’s mother. Because this man’s father had “shed blood,” this king built the first Temple in Jerusalem.** For ten points, name this wise biblical king, the son of David.

ANSWER: Solomon (accept Schlomo; accept Suleiman)

(17) **This force’s namesake constant is approximately 6.67 times ten to the negative eleventh meters cubed over kilograms times seconds squared. During (\*) free-fall, this is the only force acting on an object, causing it to accelerate at 9.8 meters per second squared.** For ten points, name this force of attraction between any two masses, commonly seen pulling objects to Earth’s surface.

ANSWER: gravity (accept gravitational constant and acceleration due to gravity; accept word forms such as gravitation)

(18) **This city is home to a massive collection of Auguste Rodin's works and Robert Indiana's *LOVE* sculpture on Benjamin Franklin Parkway. This is the largest city downriver from Trenton on the Delaware River, which separates this city from (\*) Camden, New Jersey. This city's Rittenhouse Square was designed by William Penn. The Liberty Bell is displayed in, for ten points, what largest city in Pennsylvania?**

ANSWER: Philadelphia

(19) **A character in this novel uses the pseudonyms "Provis" and "Mr Campbell" upon returning to England from Australia. Anger over being jilted drives Miss (\*) Havisham to stop the clocks in Satis House and raise Estella to be a heartbreaker in this novel. Estella's criminal father, Abel Magwitch, becomes the benefactor of Pip in, for ten points, what novel by Charles Dickens?**

ANSWER: Great Expectations

(20) **After this man made his brother Joseph an unpopular King of Spain, he had to fight the Peninsular War. This man forced the Treaty of Pressburg, which gave this man large amounts of land from the Austrian Empire. This man beat the Third (\*) Coalition at the Battle of Austerlitz in 1805, two months after his navy lost at Trafalgar. For ten points, name this emperor whose French army was defeated at Waterloo.**

ANSWER: Napoleon Bonaparte (accept either or both names; accept Napoleon I)

## Bonuses

(1) An English author named Charlotte drew from her own life experiences as a governess and teacher when writing this novel. For ten points each,

Name this novel by Charlotte, in which the title young woman works as a governess at Thornfield Hall and witnesses the death of her childhood friend Helen Burns, both of which are experiences drawn directly from Charlotte's own life.

ANSWER: Jane Eyre

Charlotte was a member of this literary family. She often wrote under a male pseudonym, as did her sisters Emily and Anne.

ANSWER: Brontë

In *Jane Eyre*, Jane works as a governess for the daughter of this man, who is secretly married to the madwoman Bertha Mason.

ANSWER: Edward Rochester (accept either underlined name)

(2) The detoxification of alcohol in liver cells relies on the heavy concentration of these organelles. For ten points each,

Name this organelle that often sends proteins to the Golgi apparatus. This organelle has a smooth form and a rough form studded with ribosomes.

ANSWER: endoplasmic reticulum (accept ER)

Unlike the rough ER, which synthesizes proteins, the smooth ER specializes in making this class of biomolecules that includes steroids and fatty acids.

ANSWER: lipids (prompt on "fats")

The ER can be overstressed in several neurodegenerative diseases caused by misfolded proteins called prions. One such disease, bovine spongiform encephalopathy, affects these animals and commonly makes them go "mad."

ANSWER: cattle (accept mad cow disease; accept any specific type of cattle, like steer, bull, etc.)

(3) This religion venerates Haile Selassie as an incarnation of Jah. For ten points each,

Name this religion, whose followers often wear their hair in dreadlocks to honor the Lion of Judah.

ANSWER: Rastafari movement (accept Rastas; accept Rastafarianism)

Many Rastas ritually smoke this drug in grounding-circles and to promote personal healing and wellness. This drug is commonly consumed in rolled spliffs or "chalice" pipes.

ANSWER: marijuana (accept ganja; accept the holy herb; accept cannabis; accept common nicknames like pot or weed)

Rasta has been popularized in America through its influence in this Caribbean nation, whose capital is Kingston.

ANSWER: Jamaica

(4) Jimmy Carter filed an official report that he observed one of these things in 1969. When Carter ran for President, he promised to release all possible information about these things, but after he was elected, he cited “national defense” and claimed he couldn’t do so after all. For ten points each,

Name these mysterious entities. The number of sightings of these things has dropped considerably in recent years, probably due to an increase in the quality of smartphone cameras.

ANSWER: UFOs (accept unidentified flying objects; do not accept or prompt other answers, such as “alien spaceships”)

This independent Senator from Vermont pledged to declassify UFO information if he wins the 2020 Presidential election. This man’s supporters are probably more interested in his support for Medicare for All.

ANSWER: Bernie Sanders (accept Bernard Sanders)

The most famous UFO incident took place near Roswell, New Mexico in 1947. Conspiracy theorists believe that a UFO crashed and its contents were taken to this Air Force facility in Nevada, which nearly two hundred people humorously tried to “raid” in September 2019.

ANSWER: Area 51 (accept Homey Airport; accept Groom Lake)

(5) Thousands of these items have been painted with names and pictures for storage in a chapel in Hallstatt. For ten points each,

Name these items. Tens of thousands of these items are used decoratively in the Sedlec Ossuary, including a massive chandelier that includes at least one of each of the two hundred six different types of them.

ANSWER: human bones (accept skeletons; prompt on “human remains;” do not accept “bodies”)

The Sedlec Ossuary is a tourist attraction in this eastern European country, whose other popular sites include Wenceslas Square, the Vysehrad [vish-eh-rahd] castle on the Vltava River, and Frank Gehry’s Dancing House.

ANSWER: Czechia (accept Czech Republic; do not accept or prompt on “Czechoslovakia”)

Bones are used as decorations elsewhere in Europe. Walls of femurs and skulls line the catacombs under this French capital city.

ANSWER: Paris

(6) During a postgame interview, professional e-sports gamer Blitzchung put on a gas mask and proclaimed “Liberate Hong Kong, the revolution of our times!” before the video stream was cut. Answer the following about the ensuing controversy, for ten points each.

Blitzchung had just finished a Grandmaster match in this online trading card game with characters from the *World of Warcraft* universe.

ANSWER: **Hearthstone**: Heroes of Warcraft

*Hearthstone* and *World of Warcraft* were created by this video game developer. This company was sharply criticized for rescinding Blitzchung’s prize winnings, banning him from its tournaments, and firing the two commentators who happened to be broadcasting the match.

ANSWER: **Blizzard** Entertainment

The Grandmaster match took place on this island, over which China claims control. During a story on the Hong Kong protests later in the week, ESPN controversially broadcast a map of China that included this island.

ANSWER: **Taiwan**

(7) The legendary experiment in which Archimedes found that metals of different densities would displace different volumes of water relies on this physical force. For ten points each,

Name this force that pushes up on an object submerged in a liquid. This force is equal to the weight of liquid displaced by the object.

ANSWER: **buoyancy** (accept **buoyant** force)

The buoyant force is strong enough that if an object is less dense than water, like a cork, it will do this when placed in water.

ANSWER: it will **float**

Although a paperclip is denser than water, it can appear to float because of this behavior, the strong tendency of water molecules to stick together. This phenomenon forms a “skin” that insects can walk on.

ANSWER: **surface tension** (accept **cohesion** and word forms like **cohesive**)

(8) Though this artist’s early paintings often feature New York skyscrapers, she spent much of her career at her Ghost Ranch studio in New Mexico. For ten points each,

Name this American artist best known for her many colorful Southwestern landscapes featuring skulls and plants.

ANSWER: Georgia **O’Keeffe**

Over two hundred of O’Keeffe’s paintings depict enlarged sections of these colorful plant parts, including *Red Canna*, *Black Iris*, and *Oriental Poppies*.

ANSWER: **flowers** (anti-prompt on specific flower parts like “petal” or “stamen”)

O’Keeffe married and modeled for this American photographer who founded the art gallery 291 and photographed immigrants separated on a ship in *The Steerage*.

ANSWER: Alfred **Stieglitz**

(9) Operation London Bridge is the traditional codename for plans to be carried out after this monarch's death. Some of those plans have been in place for decades due to this ruler's long reign. For ten points each,

Name this British queen, who surpassed Victoria as the longest-reigning British monarch in 2017.

ANSWER: Queen Elizabeth II (accept Elizabeth Alexandra Mary Windsor; prompt on "Elizabeth")

In 2012, Elizabeth enjoyed a "Diamond" type of this celebration, in honor of her sixtieth year as Queen. These anniversary celebrations often include extensive travelling, as Elizabeth enjoyed in her 2002 "Golden" one.

ANSWER: jubilee (accept Diamond Jubilee; accept Golden Jubilee)

Elizabeth's reign has not been perpetually happy; she described 1992 as her "annus horribilis." That year, Windsor Castle caught fire and three of Elizabeth's children got divorced or separated, including Prince Charles and this woman, his wife. Elizabeth was criticized for her initial seclusion after this woman was killed in a 1997 car crash in Paris.

ANSWER: Diana, Princess of Wales; (accept Lady Diana Spencer; accept Princess Diana)

(10) This author's short stories "For Esmé - With Love and Squalor" and "Uncle Wiggily in Connecticut" are collected in his *Nine Stories*. For ten points each,

Name this American author who wrote about Seymour Glass and his family in the short story "A Perfect Day for Bananafish" and the novel *Franny and Zooey*. This man wrote about the family of Phoebe and Holden in another novel.

ANSWER: J.D. Salinger (accept Jerome David Salinger)

Phoebe and Holden appear in this novel by J.D. Salinger, in which Holden leaves Pencey Prep school and takes Phoebe to ride the carousel at the Central Park Zoo.

ANSWER: The Catcher in the Rye

Phoebe and Holden are members of this family, who appear in several of Salinger's short stories as well as in *The Catcher in the Rye*.

ANSWER: Caulfield (accept Phoebe Caulfield or Holden Caulfield)



(11) A circle has only one center; geometry students *wish* triangles were that simple. Answer some questions about the trickiness of triangles, for ten points each.

The orthocenter is named for being the meeting point of the three altitudes of the triangle, and the altitudes are orthogonal to the sides of the triangle. Because the altitudes and sides are orthogonal, they meet at this type of angle.

ANSWER: **right** angle (accept **ninety** (90) degree angle; accept **pi over two** radian angle or one-**half pi** radian angle)

The centroid is the intersection of these three line segments, which extend from the vertex to the midpoint of the opposite side. In statistics, this term indicates a value that separates the top half and bottom half of a set of numbers and is often compared with a set's mean.

ANSWER: **medians**

The centroid can also be described as the result of this operation on the coordinates of the shape. In statistics, this value can be found for a set by adding all the values in a set and dividing by the number of values there are.

ANSWER: arithmetic **mean** (accept **average**)

(12) This Greek comic playwright was frequently criticized for writing plays that poked fun at the Athenian politician Cleon, the philosopher Socrates, and the Peloponnesian War. For ten points each,

Name this playwright whose satirical and insulting comedic plays include *The Wasps*, *The Clouds*, and *The Birds*.

ANSWER: **Aristophanes**

In this play by Aristophanes, Dionysus travels to the underworld to bring Euripides, another Greek playwright, back to life. The title chorus of this play sing “bre-ke-ke-kax-koax-koax” to mimic the title animals.

ANSWER: The **Frogs** (accept **Batrachoi**)

In *The Frogs*, Dionysus dresses up like this hero by wearing a lion-skin. This demigod gives Dionysus advice on how to get to the underworld, since he had made the trip himself while capturing Cerberus during this man's Twelve Labors.

ANSWER: **Heracles** (accept **Hercules**)

(13) The Van der Waals equation is a generalized form of this law that accounts for compressibility and collisions. For ten points each,

Name this equation, commonly written as “P V equals n R T,” that describes the behavior of certain gases.

ANSWER: **ideal** gas law (accept **ideal** gases)

The “n” in the ideal gas law represents the amount of the gas present, measured in this SI unit. Until November 2018, this unit was defined as the number of atoms in twelve grams of carbon-12.

ANSWER: **moles**

The ideal gas constant, R, is equal to the Boltzmann constant multiplied by this number, equal to roughly 6.022 times ten to the twenty-third power.

ANSWER: **Avogadro's** number

(14) Babur founded this empire after a victory at the First Battle of Panipat. For ten points each,

Name this Muslim empire centered at Agra that was expanded and strengthened by Akbar the Great in the sixteenth century.

ANSWER: Mughal Empire (accept Mogul Empire)

The Mughal Empire was located in this modern-day country. Akbar held court in this country's city of Agra, which is home to the Taj Mahal.

ANSWER: Republic of India

Scholars often classify the Mughal, Safavid, and Ottoman Empires as a group named for this Chinese invention, since this combination of sulfur, charcoal, and saltpeter was key to their expansions.

ANSWER: gunpowder empires

(15) Gods have a lot of pent-up anger - enough to write a bonus about it! For ten points each, answer some questions about ticked-off Greek figures.

After one of these beings, Cronus, ate all of his children except Zeus, Zeus got pretty mad and started a war between these large beings and the Olympian gods.

ANSWER: Titans (accept Titanes)

This Titan also angered Zeus by giving fire to mortals. As punishment, Zeus chained this Titan to a mountain and had eagles eat at his immortal liver.

ANSWER: Prometheus

This woman, who had an affair with Zeus, was turned into a cow for protection; however, like many of Zeus's lovers, this woman faced the wrath of Hera, who sent a gadfly to torment her.

ANSWER: Io

(16) One candidate in this election year used the slogan "It's the economy, stupid!" For ten points each,

Name this election year in which the incumbent George H.W. Bush, who was unpopular after breaking his promise of "no new taxes," was defeated by a youthful Arkansas governor.

ANSWER: Election of 1992 (prompt on "92")

This forty-second US President defeated George H.W. Bush in the election of 1992. As President, this Democrat signed NAFTA and survived an impeachment trial related to his affair with White House intern Monica Lewinsky.

ANSWER: William Jefferson "Bill" Clinton (accept William Jefferson Blythe III)

Clinton's victory in the 1992 election has been linked to this third-party candidate, whose campaign drew voters away from Bush. This billionaire owner of Electronic Data Systems died in 2019.

ANSWER: Ross Perot (accept Henry Ross Perot; accept Henry Ray Perot)

(17) In this novel, Nanny is shocked to find her granddaughter, Janie, kissing Johnny Taylor, and arranges for her to marry Logan Killicks. When Janie feels stifled by being married to an aging farmer, she runs off to Eatonville with Jody Starks. For ten points each,

Name this novel by Zora Neale Hurston, in which Jody's death leaves Janie Crawford free to marry Tea Cake for love before she returns to Eatonville.

ANSWER: **Their Eyes Were Watching God**

In *Their Eyes Were Watching God*, Janie kisses Johnny Taylor after lying under one of these plants in her backyard and wishing that she could be one of these blooming plants with “glossy leaves and bursting buds,” visited by “kissing bees.”

ANSWER: pear **tree** (accept fruit **tree**)

At the end of the novel, Janie returns to Eatonville after she is acquitted of Tea Cake's murder. She is forced to shoot Tea Cake when he attacks her after getting rabies from the bite of one of these animals. Another one of these animals, a family pet named Cujo, also contracts rabies in a novel by Stephen King.

ANSWER: **dog**

(18) In September 1776, this man was found with incriminating papers detailing British troop positions and hanged the following day. For ten points each,

Name this man who legendarily uttered, “I only regret that I have but one life to lose for my country.”

ANSWER: Nathan **Hale**

Nathan Hale was hanged for engaging in this activity, in which one secretly gathers intelligence on the opposition. Later Americans who engaged in this activity included pilot Gary Powers and the Rosenbergs.

ANSWER: **spying** (accept **espionage**; accept descriptions related to **reconnaissance** of questionable legality)

In 2013, this whistleblower released NSA documents supporting the idea that the government is spying and gathering intelligence on American citizens. He fled to Russia, where he was granted asylum.

ANSWER: Edward **Snowden** (accept Edward Joseph **Snowden**)

(19) The primary mission of the Kepler Space Telescope is to find and study these objects. For ten points each,

Give this term for large astronomical bodies found orbiting stars outside our solar system. Roughly four thousand of these bodies have been discovered as of summer 2019.

ANSWER: **exoplanets** (accept **extrasolar planets**; prompt on “planet”)

Exoplanets are most often found when they make a transit of their star. When this happens, astronomers can study the chemical makeup of this envelope of gases surrounding a planet.

ANSWER: **atmosphere**

Exoplanets are considered more interesting if they are found in the habitable zone of their star, a zone often nicknamed for this fairy tale character. Exoplanets in this zone will be the right distance from the star and not be too hot or too cold.

ANSWER: **Goldilocks** zone

(20) For ten points each, give the following about Nadia Boulanger [boo-lahn-ZHAY], one of the foremost teachers of the twentieth century.

Boulanger taught hundreds of people in this discipline after striving for years to win the Prix de Rome [pree duh Rome] herself. Her students in this discipline included Philip Glass, a minimalist who has written numerous film scores.

ANSWER: music (accept anything related to playing music, including playing piano; accept anything related to composing music)

One of Boulanger's first American students was this composer of *Fanfare for the Common Man* and the ballets *Rodeo* and *Appalachian Spring*.

ANSWER: Aaron Copland

Astor Piazzolla, another student of Boulanger, wrote music to accompany this dance form, the national dance of his home country, Argentina. Partners performing this eight-step dance tightly embrace while moving.

ANSWER: tango argentino