

Round 5

First Half

(1) **The Conway Cabal attempted to replace this man with Horatio Gates. This man led a night retreat to Manhattan after losing the Battle of Long Island. This man's wife, (*) Martha, attempted to aid soldiers under his command who were unprepared for winter at Valley Forge. The Delaware River was crossed by, for ten points, what Commander-in-Chief of the Continental Army who later became the first President of the United States?**

ANSWER: George Washington

(1) Give the following about the Battle of Puebla for ten points each.

The Battle of Puebla took place during an invasion of this North American country, which was triggered by Benito Juarez suspending payments to a European country.

ANSWER: Mexico

This European nation, then led by Napoleon III, invaded Mexico.

ANSWER: France

Mexico's victory at the Battle of Puebla is recognized on this holiday. This holiday has evolved into a general celebration of Mexican culture, especially in the United States.

ANSWER: Cinco de Mayo (accept any answer relating to the Fifth of May)

(2) **This number is multiplied by i in the exponent in Euler's [oiler's] identity, often cited as the most beautiful formula in mathematics. This number is multiplied by (*) four-thirds, as well as the cube of the radius, in the formula for the volume of a sphere. This constant is defined as the ratio between the circumference and diameter of any circle. For ten points, name this mathematical constant approximately equal to 3.14.**

ANSWER: pi

(2) For ten points each, give the following about non-linear functions.

A polynomial is linear if its degree is greater than this number. Put another way, a function can graph a line only if the highest exponent is this value.

ANSWER: 1

If the degree is 2, as in y equals a x squared plus b x plus c , the polynomial is this type of function. A namesake, commonly memorized formula can find the roots of that function.

ANSWER: quadratic (function, polynomial, formula, etc.)

The functions studied in this branch of mathematics, like sine and cosine, are definitely not linear; they're periodic waves instead.

ANSWER: trigonometry (accept word forms, like trigonometric functions)

(3) **One holder of this position stutters “N-not that you n-need it, eh?” when explaining this job to the protagonist in the Leaky Cauldron. This position has been reassigned annually since Tom (*) Riddle was denied this job, and its holders have included Barty Crouch, Dolores Umbridge, and Gilderoy Lockhart. For ten points, name this educational position at Hogwarts that teaches wizards like Harry Potter how to protect themselves from evil magic.**

ANSWER: Defense Against the Dark Arts Professor at Hogwarts (prompt on partial answers)

(3) The fictional historian “Diedrich Knickerbocker” describes a local legend about this man, who must race back each morning to reach the grave where most of him is buried. For ten points each,

Name this literary character, the ghost of a Hessian soldier who rides around Sleepy Hollow searching for his head in an early American short story.

ANSWER: The Headless Horseman

In the short story “The Legend of Sleepy Hollow,” Brom Bones warns this long-legged schoolteacher about the Headless Horseman, who abducts this man as he leaves Katrina von Tassel’s house.

ANSWER: Ichabod Crane (accept either underlined name)

“The Legend of Sleepy Hollow” is by this American author, who included both that story and “Rip van Winkle” in *The Sketchbook of Geoffrey Crayon*.

ANSWER: Washington Irving

(4) **One composer from this country built an opera house at Bayreuth [bye-royt] to host his own works. This country names a 19th century Requiem written using the (*) Luther Bible instead of a Latin text. A composer born in what is now this country was commissioned by a Margrave to write the *Brandenburg Concertos*. The *Ring Cycle* was composed in, for ten points, what home country of Richard Wagner [vahg-ner], Johann Sebastian Bach, and Johannes Brahms?**

ANSWER: Germany

(4) This material is commonly used in religious buildings like mosques and churches, since metal salts give this material a variety of vibrant colors. For ten points each,

Name this translucent artistic material. When this material is used to create windows that show patterns or religious scenes.

ANSWER: stained glass (prompt on “art glass”)

Gothic cathedrals often contain one of these massive stained glass windows, whose pattern of concentric segments mimic the petals of a namesake flower.

ANSWER: rose window (accept Catherine window)

This artist worked primarily with stained glass, and used his copper foil framing technique to create church windows, jewelry, and stained glass lampshades.

ANSWER: Louis Comfort Tiffany

(5) **In Aztec mythology, Quetzalcoatl was a serpent covered in these objects, and one of these objects representing the goddess Ma'at was weighed against the (*) hearts of the dead in Egyptian mythology. Daedalus stuck these objects together with wax to escape from Crete. For ten points, Icarus fell out of the sky after the sun's heat made what objects fall out of his wings?**

ANSWER: feathers

(5) This journey is one of the Five Pillars of Islam, and must be completed at least once by all able-bodied Muslims. For ten points each,

Name this pilgrimage to the home city of the prophet Muhammad.

ANSWER: the Hajj

The Hajj is a pilgrimage to this city in Saudi Arabia, where Muslims walk around the Ka'aba, which Muslims must face when praying.

ANSWER: Mecca

The Ka'aba was built by this early prophet, the father of Ismail. This man is also a patriarch of Judaism and Christianity, in which he is better remembered as the father of Isaac.

ANSWER: Ibrahim (accept Abraham)

(6) **One of these works promoted secular education and was edited by Jean d'Alembert and Denis Diderot during Enlightenment-era France. Pliny the Elder's *Naturalis* (*) *Historia* is an early example of these works. Another of these works published a 32,000 page edition in 2010 and is now maintained online. For ten points, name these reference works that summarize information, such as one labeled *Britannica* and an online one named Wikipedia.**

ANSWER: encyclopedia (prompt on reference works before mentioned)

(6) A common joke about this fighting force, circa 1944, noted that white planes were American and black planes were the RAF; if you saw no planes, that was this force. For ten points each,

Name this air force that participated in World War II-era blitzkrieg warfare as part of the *Wehrmacht* [vair-makt].

ANSWER: Luftwaffe (prompt on descriptions of the (Nazi) German air force)

In 1940, the Luftwaffe were unable to bombard this country into submission, primarily due to the fantastic defense of its RAF, or Royal Air Force.

ANSWER: United Kingdom (or Great Britain; accept Battle of Britain; accept England)

In recognition of the outstanding performance of the RAF during the Battle of Britain, this British Prime Minister remarked "Never, in the field of human conflict, was so much owed by so many to so few."

ANSWER: Sir Winston Churchill

(7) **This organ includes the organ of Corti, as well as three small bones called the hammer, anvil, and stirrup. Within this organ, the semicircular canals control (*) balance and a spiral-shaped chamber called the cochlea controls its primary function. The tympanic membrane, often described as a “drum,” is found in the outer section of, for ten points, what organ whose failure leads to deafness?**

ANSWER: ear (accept cochlea before it is said; accept inner ear; accept outer ear only after “outer” is said)

(7) An unsolved “heating problem” about this region asks why it is so much hotter than the Sun’s surface below. For ten points each,

Name this aura that surrounds stars, including our Sun. This term is the Latin for “crown.”

ANSWER: corona (accept coronal heating problem)

The corona is made up of this phase of matter, made up of highly ionized particles with far more energy than gaseous particles.

ANSWER: plasma

The corona is easily seen, even by the protected naked eye, during these events, in which the Moon passes between the Sun and the Earth.

ANSWER: (total) solar eclipse

Sixty Second Rounds

The categories are ...

1. Fahrenheit 451
2. Battle of Gettysburg
3. Skin
4. Portraits

FAHRENHEIT 451

In the novel *Fahrenheit 451*, who or what is...

(1) the novel's author, who also wrote the sci-fi collection *The Martian Chronicles*?

ANSWER: Ray Douglas **Bradbury**

(2) the profession of the protagonist, whose job is to burn books?

ANSWER: **fireman**

(3) the name of the protagonist, who grows disillusioned by book burnings and goes into exile?

ANSWER: **Guy Montag** (accept either underlined name)

(4) the teenaged, intellectual girl who befriends the protagonist and is killed by a car?

ANSWER: **Clarisse McClellan** (accept either underlined name)

(5) the synthetic creatures that hunt down fugitives like the novel's protagonist?

ANSWER: **Mechanical Hound** (accept **metal dog**; prompt on "hound" or "dog")

(6) the process by which a group of exiles led by Granger preserve the books being destroyed?

ANSWER: **memorizing** them (accept word forms like **memorization**; accept descriptions like "committing them to **memory**")

BATTLE OF GETTYSBURG

Name the...

(1) American war in which the battle, a loss for the Confederacy, took place.

ANSWER: American Civil War

(2) U.S. state where the battle took place, a little south of Harrisburg.

ANSWER: Pennsylvania

(3) U.S. President who delivered an address dedicating a Soldiers' Cemetery at Gettysburg four months after the battle.

ANSWER: Abraham Lincoln

(4) phrase that opens that address, describing the time passed since the signing of the Declaration of Independence.

ANSWER: Four score and seven years ago

(5) Union general who defeated Robert E. Lee at Gettysburg after replacing Joseph Hooker.

ANSWER: George Gordon Meade

(6) failed Confederate assault on the last day of the battle, a charge that failed to break Union lines on Cemetery Ridge.

ANSWER: Pickett's Charge

SKIN

Name the...

(1) Keratin-based filaments that cover mammalian skin, especially on a human scalp.

ANSWER: hair (accept fur)

(2) Keratin-based structures that cover the skin of reptiles and fish.

ANSWER: scales (accept scutes)

(3) Bird that names a type of “bump” that covers the skin as a response to a cold shock or other stimulus.

ANSWER: goose (accept goosebumps, gooseflesh, goosepimples, etc.)

(4) Secretion made by sudoriferous glands in mammalian skin, especially in human armpits.

ANSWER: sweat

(5) Vitamin synthesized in the skin as a response to sunlight.

ANSWER: Vitamin D

(6) Outer layer of skin, the primary barrier against dangerous microbes, which is not fed by blood vessels.

ANSWER: epidermis (do not prompt or accept dermis)

PORTRAITS

Name the...

(1) iconic portrait of a woman with an enigmatic smile, created by Leonardo da Vinci.

ANSWER: Mona Lisa (accept La Gioconda)

(2) artist who painted a *Self Portrait with Bandaged Ear*, as well as *Starry Night*.

ANSWER: Vincent Willem van Gogh

(3) piece of jewelry that names a Johannes Vermeer portrait of a young girl in a blue and yellow head scarf.

ANSWER: pearl earring (accept Girl with a Pearl Earring)

(4) color worn by a boy in a Gainsborough portrait, and by Picasso's *Old Guitarist*.

ANSWER: blue (accept Blue Boy)

(5) last name of a Flemish merchant painted by Jan van Eyck [yon van IKE] alongside his green-clad wife.

ANSWER: Arnolfini (accept The Arnolfini Wedding or The Arnolfini Portrait; accept Giovanni Arnolfini and his bride)

(6) subject of a series of Rubens portraits, a female member of a Florentine banking family.

ANSWER: Marie di Medici

Second Half

(8) This language was used to write *The House of the Spirits* and *Twenty Love Poems and a Song of Despair*, works by Isabel Allende [ah-YEN-day] and Pablo Neruda, two (*) Chilean writers. A novel in this language follows the adventures of Sancho Panza, a squire to a delusioned “knight,” and was written by Miguel de Cervantes. For ten points, name this language used to write *Don Quixote*.

ANSWER: Spanish (accept español)

(8) The fantastic creatures that inhabit this world include a singing Mock Turtle, a Lizard named Bill, and a hookah-smoking Caterpillar. For ten points each,

Name this magical world that Alice visits in the novels of Lewis Carroll.

ANSWER: Wonderland

This animal resident of Wonderland offers Alice nonexistent wine at a “mad tea party” with a Dormouse and the Mad Hatter.

ANSWER: March Hare

Alice is directed to the March Hare’s tea party by this grinning creature, which has the ability to fade away to invisibility.

ANSWER: Cheshire Cat

(9) Due to the Rocky Mountains rain shadow, the largest American example of this ecosystem has few trees and moderate rainfall. Fire removes trees from this ecosystem but fails to clear most of its plant life, a mix of (*) grasses with fibrous roots that create a tough, matted layer of soil called sod. Much of this ecosystem was cleared by European colonists for farming. Voles, bison, and coyotes are common in, for ten points, what biome of grassland in the Great Plains of the U.S.?

ANSWER: prairie (prompt on (Great) Plains before mentioned; prompt on grassland before mentioned; prompt on savannah)

(9) This quantity is measured by anemometers, which often consist of a set of four sideways cups in an x-shape, which spin faster when this quantity is higher. For ten points each,

Name this quantity, which was measured at over 230 miles per hour on New Hampshire's Mount Washington in 1934.

ANSWER: wind speed (accept equivalents; prompt on wind alone)

In 1805, a British naval officer set up and named this scale, which classifies wind speed on a 0 to 12 system.

ANSWER: Beaufort scale

A wind speed rating 12 on the Beaufort scale is reserved for winds over 73 miles per hour, generally caused by these cyclonic storms in the Atlantic Ocean. The Saffir-Simpson scale uses a five-category system to classify these storms.

ANSWER: hurricanes (do not accept other terms, like typhoons or tropical storms)

(10) **Types of this concept include cyclical, which changes based on the season or on the natural business cycle, structural, in which a changing industry needs fewer (*) workers, and frictional, in which a worker is "between" jobs. This concept peaked in the US near 25% during the Great Depression. For ten points, name this economic concept that measures how many people are out of work.**

ANSWER: unemployment rate

(10) This river is known as the Chang Jiang, which appropriately translates as "Long River;" its common name in the West actually refers just to a lower section beginning at Nanjing. For ten points each,

Name this river, on which the Three Gorges Dam was built.

ANSWER: Yangtze River

The Yangtze is the longest river in this country, the most populous country in Asia and, indeed, the world.

ANSWER: People's Republic of China

The Yangtze River drains into the East China Sea; this large city of more than 24 million people lies on the Yangtze's delta.

ANSWER: Shanghai

(11) **In 2014, Google released a low-cost version of this technology titled Google Cardboard, which competed with Samsung's more traditional Gear. Capcom released a demo for Resident Evil 7, titled (*) KITCHEN, which used this technology. Games made exclusively for this technology include *Job Simulator: The 2050 Archives*. Headsets and motion controls are a key part of, for ten points, what immersive video game technology used in the Oculus Rift?**

ANSWER: virtual reality (accept VR)

(11) Sean Paul's patois [pah-twah] dialect on a 2016 remix of this song confused more than few Twitter users who questioned why the word "gold" had two syllables. For ten points each,

Name this song, whose chorus notes "I don't need dollar bills to have fun tonight" while praising the cost-effectiveness of dancing.

ANSWER: Cheap Thrills

"Cheap Thrills" is sung by this Australian singer of "Chandelier."

ANSWER: Sia (accept Sia Furler)

Sean Paul's patois dialect is also known as the creole of this island, Sean Paul's birthplace. Other musicians born on this Caribbean island include Bob Marley.

ANSWER: Jamaica

(12) **Sydney Chapman discovered the cyclical process by which this compound is regenerated. This compound is produced when (*) ultraviolet radiation interacts with a far more common two-atom compound, though man-made CFCs have disrupted that process. For ten points, name this compound consisting of three atoms of oxygen that forms a protective layer of the Earth's atmosphere.**

ANSWER: ozone (accept O₃; prompt on oxygen before said)

(12) Symptoms of these events include nausea, fatigue, sweating, shortness of breath, and chest pain, though women often experience that pain differently than men. For ten points each,

Give this common term for a medical crisis officially known as a myocardial infarction.

ANSWER: heart attack

Victims of heart attacks are encouraged to immediately take this medicine, which can be derived from willow leaves and bark. Excedrin combines this drug with caffeine and acetaminophen.

ANSWER: aspirin

Specifically, aspirin helps during a heart attack by stopping these tiny blood cells from clotting the blood.

ANSWER: platelets (or thrombocytes)

(13) **The protagonist of this novel is quizzed by a "tattered soldier" after he flees the 304th regiment. In this novel, Wilson cares for the protagonist after he is hit on the head with a rifle, and the protagonist tries to avenge (*) Jim Conklin's death by fighting Confederate soldiers. For ten points, name this novel by Stephen Crane in which Henry Fleming wants to get wounded in the Civil War in order to prove his bravery.**

ANSWER: The Red Badge of Courage

(13) This writer died after hiding in a secret annex in Amsterdam. For ten points each, Name this writer, whose only work was published as *The Diary of a Young Girl* after World War II.

ANSWER: Anne Frank (accept Anneliese Marie Frank)

Anne Frank died in the Bergen-Belsen concentration camp after a long imprisonment at Auschwitz during this Nazi operation that sought to exterminate or enslave the Jewish population.

ANSWER: Holocaust

Unlike Anne Frank, Elie Wiesel, who was imprisoned in Auschwitz and Buchenwald, survived the Holocaust and recorded his experiences in this book.

ANSWER: Night (accept La Nuit)

(14) **After this country's King Haakon VII was forced to flee to England by the Nazis, Vidkun Quisling led a puppet government in this country. This country's coastal landscape is marked by hundreds of (*) glacier-cut grooves called fjords [fyords].** The 14th century Kalmar Union consisted of Denmark, Sweden, and, for ten points, what Scandinavian country whose capital is Oslo?

ANSWER: Norway

(14) A portion of this system ran to Florida while it was still a Spanish territory. For ten points each, Name this secretive network of escape routes which aided slaves in escaping the South.

ANSWER: Underground Railroad

This woman was nicknamed Moses for her service on the Underground Railroad. In 2016, plans to honor this woman on the \$20 bill were announced.

ANSWER: Harriet Tubman

A key goal of the Underground Railroad was crossing this waterway, nicknamed the "River Jordan." This river separated its namesake state from the slave state of Kentucky.

ANSWER: Ohio River

Extra Question

Only read if you need a backup or tiebreaker!

(15) **This state is home to the Bonneville Salt Flats, whose speedway has been used to set numerous land speed records. This state contains (*) Promontory Point, the site where the Transcontinental Railroad was completed. Provo is a city in this state, to which Brigham Young led a migration of Mormons.** For ten points, name this state, the home of Salt Lake City.

ANSWER: Utah

(15) This condition, whose duration is called gestation, can be highly dangerous if it is ectopic. For ten points each,

Name this condition that, for humans, lasts roughly 9 months, often divided into trimesters.

ANSWER: pregnancy (accept word forms)

In the early stages of pregnancy, a fertilized embryo attaches to the wall of this organ, in which the fetus develops. In ectopic pregnancies, the embryo attaches outside this organ.

ANSWER: uterus (accept womb)

Most ectopic pregnancies occur when the embryo implants in a Fallopian tube, but in rare cases, the embryo may attach to one of these egg-producing organs.

ANSWER: ovary