

Playoff Round 2

First Half

(1) **This empire's navy was defeated by Don Juan of Austria at the Battle of Lepanto. This empire was defeated at a 1529 siege of Vienna, halting its plans of European domination. A leader of this empire earned the name "The (*) Conqueror" after successfully capturing Constantinople. Mehmed II and Suleiman the Magnificent led, for ten points, what empire whose former capital, Istanbul, is now part of Turkey?**

ANSWER: Ottoman Empire (do not accept or prompt on Turkey)

(1) The nickname for this weapon references a Soviet foreign minister who claimed that bombing missions were actually food drops. For ten points each,

Name this incendiary weapon, usually crafted by filling a bottle with gasoline, stuffing a kerosene-soaked rag in the bottle, lighting the rag, and tossing the bottle at the target.

ANSWER: Molotov cocktail

Molotov cocktails were developed by defenders of this nation, which fought the Soviets in the 1939-1940 Winter War.

ANSWER: Finland

Soviet Foreign Minister Molotov is the co-namesake, with Joachim von Ribbentrop, of a 1939 neutrality pact between the USSR and this European country, which violated the pact by attacking the Soviets in Operation Barbarossa.

ANSWER: Nazi Germany

(2) **This author wrote about the Kuragin, Bolkonsky, and Rostov families during the Napoleonic war in an enormously long novel. In another of this man's novels, the title noblewoman, the sister of Stiva Oblonsky, has an affair with Count (*) Vronsky and throws herself under a train. For ten points, name this Russian author of *War and Peace* and *Anna Karenina*.**

ANSWER: Leo Nikoleyovich Tolstoy (accept Lev Tolstoy)

(2) Female detectives are popular protagonists. For ten points each,

This English writer created the spinster detective Miss Jane Marple, as well as other detectives like Hercule Poirot [ayr-KYOOL pwah-ROH].

ANSWER: Agatha Mary Clarissa Christie

This American detective was the subject of books by the fictional author Carolyn Keene. This young detective investigates crimes with the help of her father, an attorney named Carson, and with her good friends Bess and George.

ANSWER: Nancy Drew (accept either underlined name)

Though he has a typically feminine name, this young, criminally-minded genius created by Eoin Colfer [”Owen” Colfer] helps perform investigations with his one-time kidnapping victim, L.E.P. officer Holly Short.

ANSWER: Artemis Fowl II (accept either underlined name)

(3) **One-half of this value is equal to both sine and cosine of 45 degrees. According to legend, Hippasus was murdered by followers of Pythagoras for teaching that this number could not be written as a (*) fraction.** This number, approximately equal to 1.414, can be written as an integer raised to the one-half power. For ten points, name this number which, when multiplied by itself, gives the smallest positive even number.

ANSWER: square root of 2

(3) For ten points each, answer the following about mathematical products.

“Product” is the name for the result of this basic arithmetic operation.

ANSWER: multiplication (accept times or other clear equivalents)

These mathematical objects can undergo the dot product and cross product operations. Within physics, this term also refers to quantities that possess magnitude and direction.

ANSWER: vectors

This French mathematician names a product of sets that includes ordered pairs of elements from the original sets. Making him the namesake made sense; he also names the rectangular coordinate system in which we’re most familiar with using ordered pairs to plot points.

ANSWER: Rene Descartes (accept Cartesian product, Cartesian coordinate system)

(4) **A sculpture of this man as the “Redentor” stands with outstretched arms, overlooking Rio de Janeiro. In Michelangelo’s *Pietà*, this man’s body is cradled by his mother. In a painting of this man by Rubens, a (*) crown of thorns rests in a bowl of blood as his body is lowered to the ground.** For ten points, name this religious figure whose mother, Mary, mourns in paintings of this man’s *Descent from the Cross*.

ANSWER: Jesus Christ (accept either underlined name; accept Cristo Redentor or Christ the Redeemer)

(4) One of these instruments voices the Swan in Jean Sibelius' *Swan of Tuonela*. For ten points each, Name this woodwind instrument, named for a European country. It is pitched a perfect fifth below a related instrument, the oboe, but it's not nearly as low as the bassoon.

ANSWER: English horn (or Cor anglais; do not prompt on horn)

The English horn, oboe, and bassoon all share this characteristic, in which a pair of strips of cane or other material vibrate against each other. In contrast, a clarinet and a saxophone only use a single piece of cane, which vibrates against a mouthpiece.

ANSWER: double reed (accept word forms, like "they're double-reeded instruments"; prompt on "reed" alone)

Another musical instrument named after a country, the French horn, is often made out of this metal alloy. Trumpets and trombones are also usually made of this material, which names their section of an orchestra.

ANSWER: brass

(5) **Three of these people tell one character that he will become Thane of Cawdor, then King of Scotland, and are collectively known as the "weird sisters" in Shakespeare's (*) *Macbeth*.** Abigail Williams accuses Elizabeth Proctor of being one of these people in Arthur Miller's *The Crucible*. For ten points, name these alleged magic-practitioners who were tried in Salem, Massachusetts.

ANSWER: witches (accept weird sisters before it is read)

(5) In parts of this novel, Eliza and George escape to Canada, where Eliza is reunited with her long-lost mother, and their entire family moves to Liberia. For ten points each,

Name this abolitionist novel, in which the title slave is sold to and then killed by the villainous Simon Legree.

ANSWER: Uncle Tom's Cabin

Before being sold to Simon Legree, Uncle Tom befriends this angelic little girl, whose father does not fulfill the promise he makes to free Uncle Tom.

ANSWER: Little Eva St Claire

Uncle Tom's Cabin is by this American abolitionist author.

ANSWER: Harriet Beecher Stowe

(6) **One part of this amendment was studied in *Schenck v. US*, in which the Supreme Court created the "clear and present danger" test to decide whether this amendment is being violated. This amendment includes the (*) Establishment and Free Exercise Clauses, creating one of its five commonly listed freedoms.** For ten points, name this Bill of Rights amendment that protects the press, speech, religion, assembly, and right to petition the government.

ANSWER: 1st Amendment of the U.S. Constitution

(6) The Pont Neuf and Pont d'Arcole are among the 9 bridges that reach this island, which is home to Notre Dame cathedral. For ten points each,

Name this island in the Seine [sehnh] River.

ANSWER: Île de la Cité [eel duh lah see-TAY]

The Île de la Cité is the center of this European capital city.

ANSWER: Paris

An underground memorial to victims of the Holocaust - specifically, to people deported by this puppet government established in France by the Nazis - was built on the Île de la Cité in the 1960s.

ANSWER: Vichy [vee-shee] France

(7) **This organ and the liver can produce erythropoietin [air-ith-roh-poy-tin], a hormone that controls red blood cell production. When these organs fail, their function can be replaced by (*) dialysis.** Urine travels to the bladder from these organs, which receive their blood from the renal arteries. For ten points, name these bean-shaped organs responsible for filtering blood, of which humans have two.

ANSWER: kidneys

(7) This quantity is essentially the concept of friction for electricity. For ten points each,

Name this quantity that describes how hard it is pass an electric current through an object.

ANSWER: resistance

This German physicist is the namesake of a formula that calculates resistance. He also names the SI unit for resistance.

ANSWER: Georg Ohm (accept Ohm's Law)

Ohm's law notes that the current is equal to this quantity divided by the resistance. AAA and AA batteries provide 1.5 units of this quantity, and a common rectangular battery provides 9 units of it.

ANSWER: voltage (accept volts and other word forms)

Sixty Second Rounds

The categories are ...

1. A Poem About a Norseman
2. European Islands
3. Gravity
4. The Persistence of Memory

A POEM ABOUT A NORSEMAN

In an anonymously-written Old English epic poem about a Geatish [GATE-ish] warrior, who or what is...

(1) the name of the warrior, who defends the mead-hall Heorot [HAY-oh-rote] against a monster?

ANSWER: Beowulf

(2) the monstrous “descendant of Cain” who raids Heorot until he is killed by the warrior?

ANSWER: Grendel

(3) the underwater creature who tries to avenge the “descendant of Cain’s” death, but is also killed by the warrior?

ANSWER: Grendel’s mother

(4) the owner of the mead-hall Heorot, who employs the warrior to defeat the monsters?

ANSWER: Hrothgar

(5) the kind of monster that eventually kills the warrior after he spends many years as a successful king?

ANSWER: a dragon

(6) the warrior’s close friend, who accompanies him on his final battle?

ANSWER: Wiglaf

EUROPEAN ISLANDS

Which European island...

(1) Was partitioned in 1921 into a Northern region and a separate republic governed from Dublin?

ANSWER: **Ireland**

(2) Is home to roughly 200,000 Scandinavians in Reykjavik? [rake-yeh-vik]

ANSWER: **Iceland**

(3) Is divided into England, Scotland, and Wales?

ANSWER: Great **Britain**

(4) Lies across the Strait of Messina from the “boot” of Italy?

ANSWER: **Sicily**

(5) Was the site of Napoléon’s first exile in 1814, prior to his Hundred Days and final exile to Saint Helena?

ANSWER: **Elba**

(6) Is divided by the Green Line, a UN buffer zone that runs through Nicosia?

ANSWER: **Cyprus**

GRAVITY

Name the...

(1) theoretically fastest possible speed in the universe, which is also the speed of gravity according to a 2012 Chinese experiment.

ANSWER: speed of light in a vacuum (accept lightspeed; prompt on “c”)

(2) English physicist whose *Principia* included his Law of Universal Gravitation, which may have been inspired by falling apples.

ANSWER: Sir Isaac Newton

(3) type of large, dark object whose gravitational pull is so strong that they can hold together galaxies.

ANSWER: (supermassive) black holes

(4) astronomical formation in which a pair of stars orbit each other, as seen in Sirius.

ANSWER: binary star system

(5) German physicist whose visualization of gravity appeared in his theory of general relativity.

ANSWER: Albert Einstein

(6) fabric of the universe that bends around large masses to create gravity in general relativity.

ANSWER: spacetime (do not prompt on partial answer)

THE PERSISTENCE OF MEMORY

In relation to the twentieth-century Spanish painting *The Persistence of Memory*, who or what is...

(1) the “soft,” seemingly melting objects draped across various surfaces in the painting?

ANSWER: clocks

(2) the type of insects crawling around a down-turned object on the painting’s left side?

ANSWER: ants

(3) the dead-looking object sitting on a brown, box-like surface, over which a melting object is draped?

ANSWER: dead tree trunk

(4) the creator of *The Persistence of Memory*, who also painted *Swans Reflecting Elephants*?

ANSWER: Salvador (Domingo Felipe Jacinto) Dalí i Domènech

(5) the art style in which it is painted, which emphasizes strange and dream-like scenes?

ANSWER: surrealism (accept word forms like surreal)

(6) the process that the painting goes through in a later version of the painting in which the scene is flooded and stretched?

ANSWER: disintegration (accept word forms like disintegrating; accept The Disintegration of the Persistence of Memory)

Second Half

(8) **Description acceptable. During this event, the plea “why don’t you stay?” was paired with a heartfelt hug of a fan. This event involved a 360-degree keyboard and was praised for not using a (*) lip-sync track.** It began with a series of 300 drones forming the American flag as its performer appeared to jump off the roof of NRG Stadium. “Born This Way,” “Poker Face,” and “Bad Romance” were performed in, for ten points, what 2017 concert, held at the intermission of the NFL championship?

ANSWER: Lady Gaga’s Super Bowl halftime show (accept descriptions of Lady Gaga performing at the Super Bowl; accept descriptions of Super Bowl 51’s halftime show; prompt on partial answers)

(8) Give the following about competitive Norwegians for ten points each.

The current world champion of this game is a 26-year-old Norwegian, having defeated Sergey Karjakin in the 2016 World Championship of this game with a brilliant queen sacrifice, despite being down a bishop.

ANSWER: chess

Name the aforementioned world champion chess grandmaster, the second-youngest in history to attain that title.

ANSWER: Magnus Carlsen

In 2013, Magnus Carlsen won Norwegian Sportsperson of the Year; the previous and following years, that award was won by Tora Berger and Ole Einar Bjordalen, athletes in this winter Olympic sport that combines shooting and cross-country skiing.

ANSWER: biathlon

(9) **This material is believed to be composed of WIMPs, as the MACHO hypothesis has several problems. A slow-moving form of this material is described as “cold.” This material is named for its apparent non-interaction with electromagnetic radiation, making it effectively (*) invisible.** For ten points, name this type of as-yet not directly observed material, a form of matter that makes up a quarter of the universe’s mass-energy.

ANSWER: dark matter

(9) This substance is the most commonly-used psychoactive drug in the world. For ten points each, Name this stimulant, a drug found in coffee beans and tea leaves.

ANSWER: caffeine

Caffeine works by blocking adenosine receptors within this bodily system, which includes the brain and the spinal cord.

ANSWER: (central) nervous system

When caffeine blocks adenosine receptors, it increases the activity of dopamine, a chemical that serves this function in the nervous system. These chemicals are released by neurons to allow signals to travel through the nervous system.

ANSWER: neurotransmitter

(10) **This author wrote about post-World War I American expatriates Frederic Henry and Jake Barnes in the novels *A Farewell to Arms* and *The Sun Also Rises*. This author wrote about Manolin's teacher, (*) Santiago, who goes for 84 days without catching a fish before catching a giant marlin. For ten points, name this American author of *The Old Man and the Sea*.**

ANSWER: Ernest Miller Hemingway

(10) This character's journey to Hades is re-imaged in Ezra Pound's Canto I. For ten points each:

Name this hero who attempts to feign madness by sowing his fields with salt. Palamedes tricked this man by placing his infant son in front of the plough. This hero goes on a journey in a namesake Homeric epic.

ANSWER: Odysseus (accept Ulysses)

This is the child Palamedes places in front of Odysseus's plough. This son of Odysseus travels with Athena to Pylos on a visit Nestor. He also warns his father about the suitors seeking Penelope's hand in marriage.

ANSWER: Telemachus

In a famous scene from the Odyssey, Penelope tests her husband Odysseus to prove his identity by requesting her bed be moved. Odysseus claims doing so would be impossible because this perennial plant is one of the bed's legs.

ANSWER: olive tree

(11) **D.C Stephenson led an Indiana branch of this organization which, by the 1920s, was the largest in the world. D.W. Griffith's film *The Birth of a Nation* inspired this group, which met at (*) Stone Mountain and celebrated its revival by burning a cross. Thousands of lynchings were carried out by members of, for ten points, what white supremacist organization, known for wearing white pointed hoods?**

ANSWER: Ku Klux Klan (accept KKK)

(11) Malcolm Brown took a photo of Thich Quang Duc [tih wahng duc] performing this action in Saigon. For ten points each,

Name this method of suicide, commonly used to protest religious discrimination in South Vietnam.

ANSWER: self-immolation (accept descriptions of setting oneself on fire)

Self-immolation is a common form of protest among monks of this religion, including the aforementioned Duc in Saigon. In recent years, the Dalai Lama has praised members of this religion who have performed self-immolation.

ANSWER: Buddhism

The self-immolation of Mohamed Bouazizi in this country sparked the Arab Spring in 2010. This country is the northernmost country in Africa.

ANSWER: Tunisia

(12) **After this mythological figure tricked Hera with incredibly long stories meant to distract her from one of Zeus's affairs, this figure was cursed to be unable to start a sentence. This oread's body (*)** wasted away after she was rejected by Narcissus. For ten points, name this Greek nymph, whose disembodied voice was doomed to faintly repeat what other people said.

ANSWER: Echo

(12) This holiday celebrates the harvest, fellowship, and forgiveness. For ten points each,

Name this springtime Hindu "festival of colors" that is celebrated with open gatherings at which people throw colorful powders and colored water over each other.

ANSWER: Holi ["holy"]

Holi is a two-day festival; the first night of Holi is celebrated with one of these things that represents destroying evil. In the Vedas, Agni is a god of this very hot and destructive substance.

ANSWER: Holika bonfire

Holi begins on the night of this bright nighttime event in the month of Phalguna, when the moon stops waxing and begins waning.

ANSWER: full moon (accept Purnima)

(13) **The alliance between Nazi Germany and Italy was known as the "Pact of" this material. During the Great Leap Forward, the Communist Party caused the Great Chinese Famine in part by ordering farmers to produce this material in backyard (*)** furnaces. Andrew Carnegie made a fortune in this industry, selling his company to J.P. Morgan in 1901. The Bessemer process uses pig iron to make, for ten points, what industrial metal used to build skyscrapers?

ANSWER: steel

(13) Leaders of this political movement included Robert La Follette, Teddy Roosevelt, and William Jennings Bryan. For ten points each,

Name this political ideology, which names an “Era” of American history from the 1890s to the 1920s. It opposed government corruption and monopolies, trying to reform the problems of the Gilded Age.

ANSWER: progressivism (accept word forms relating to progressive politics)

In 1912, Teddy Roosevelt returned to politics as the leader of the Progressive Party, a third party commonly known by this animal nickname.

ANSWER: Bull Moose Party

This state was a bastion of Progressive Era politics under Robert La Follette, who served almost 20 years in the Senate and 5 years leading this state as Governor from Madison.

ANSWER: Wisconsin

(14) **Boundaries within these materials have positive and negative sides called a p-n junction; those boundaries are created when these materials are “doped.” The resistance of this type of material rises as temperatures (*) fall, unlike the behavior of metals. Silicon is commonly used in these materials. For ten points, name this type of material whose name notes that it acts like something between a insulator and a conductor.**

ANSWER: semiconductors

(14) Clyde Tombaugh discovered this celestial body in 1930, the first body in the Kuiper belt [kye-per belt] to be discovered. For ten points each,

Name this dwarf planet in our solar system, formerly considered the ninth planet.

ANSWER: Pluto

This largest satellite of Pluto as discovered in 1978, decades before the discoveries of Styx, Nix, Kerberos, and Hydra. As with those bodies, this moon’s name is inspired by stories of the Greco-Roman mythical underworld.

ANSWER: Charon

Pluto, as well as Charon and its other moons, were observed in a 2016 flyby mission by this NASA probe.

ANSWER: New Horizons

Extra Question

Only read if you need a backup or tiebreaker!

(15) **This country launched Operation Uranus, an offensive to encircle Friedrich Paulus's Sixth Army within one of its own cities. In that battle, this country's army had been pushed back to the west bank of the (*) Volga River. This country was invaded during Operation Barbarossa, which was stunted after the German defeat at Stalingrad. For ten points, name this country that successfully defended another of its cities in the Battle of Moscow.**

ANSWER: Soviet Union (or USSR or Union of Soviet Socialist Republics; accept СССР or Союз Советских Сотсиалистических Республик; do not prompt on Russia)

(15) Earth is part of the Milky Way; give the following about our nearest neighbor galaxy for ten points each.

The galaxy is named for what Greek mythological princess, who is saved by Perseus?

ANSWER: Andromeda (galaxy)

The Andromeda galaxy takes what shape, probably with two arms? The Milky Way is also this type of galaxy.

ANSWER: (barred) spiral galaxy

Andromeda is number 31 in what Frenchman's catalog of astronomical objects?

ANSWER: Charles Messier (accept Messier catalog; prompt on M)