

Round 3

2015 Potatoville Varsity

Alston Boyd • B. Alan Smithee • Alec Krueger • Kevin Jiang • Kristin A. Strey
Franz Varga • Tyler Vaughan • Shreyas Vissapragada • Andrew Wang • Michael H. Wong

Tossups

1. **This deity drank from Son, Bodn, and Odrarer. He was pursued by Suttung while disguised as the farmhand Bolverk. He possessed a ring that recreated itself eight times every ninth night, Draupnir, and drank from the Well of Mimir. This son of Bestla and Borr consumed the (*) Mead of Poetry, and owned Hugin and Munin. He hung himself from Yggdrasil for nine days to learn the secrets of the runes, and he rode the eight-footed horse Sleipnir. For 10 points, name this husband of Frigg, the one-eyed Allfather of Norse mythology.**

Answer: Odin (accept Wotan)

2. **With Paul Morrissey, this man directed a film about the residents of a namesake hotel, *Chelsea Girls*. He produced ink-on-wood *Brillo Boxes* and coordinated the *Exploding Plastic Inevitable* event. This man painted an electric chair in *Orange Disaster*, and a *Green Car Crash* as part of his (*) *Death and Disaster* series. His art films included an eight-hour-long film of a New York City building, and he mass-produced portraits of Marilyn Monroe from his studio, The Factory. For 10 points, name this Pop Artist, who created silkscreen paintings of *Campbell's Soup Cans*.**

Answer: Andy Warhol (accept Andrew or Andrej Warhola, Jr)

3. **This author created the character Cornudet [kor-noo-DAY], a red-bearded man who frequents democratic cafés and joins the Count de Breuille [cont duh breh-VEEL] and eight other people on a carriage ride to La Havre [lah hahv] in one of this man's works. The prostitute Elisabeth Rousset [roo-SAY] is pressured to sleep with a (*) Prussian officer in a short story by this author. Another of his stories was parodied in Henry James's "Paste," and follows Mathilde Loisel [mah-TEELD luh-ZELL], who pays 36,000 francs to replace an object lent to her by Madame Forestier [foh-reh-stee-AY], though that object is fake. For 10 points, name this French author of "Ball of Fat" and "The Necklace."**

Answer: Guy de Maupassant [gee duh moh-pah-SAHN]

4. **Taking the derivative of angular frequency with respect to wavenumber in a vacuum electromagnetic wave's dispersion relation gives this value. Rapidity is defined as the hyperbolic tangent of a ratio with this quantity in the denominator; that ratio is symbolized beta and appears in (*) special relativity. Taking the product of vacuum permittivity and permeability, then taking the square root and the reciprocal, will yield this quantity. Though the phase velocity of an electromagnetic wave can be manipulated to exceed this constant, the group velocity cannot. Energy and mass are related by squared factor of, for 10 points, what quantity, symbolized "c," equal to about 3 times 10⁸ meters per second?**

Answer: the speed of light (accept c before it is read)

5. **Bithiah left her homeland with this figure, her adopted son, who met the seven daughters of Reuel at a well in Midian. This man was the father of Gershom with Zipporah, the daughter of Jethro. This brother of (*) Miriam was enraged when he discovered that Aaron had created a Golden Calf while this religious leader was communing with God on Mount Sinai. The burning bush was witnessed by, for 10 points, what religious figure, who received the Ten Commandments and led the Israelites out of Egypt?**

Answer: Moses (accept Moshe or Musa)

6. The people of this nation were once known as Kambojas, and it is common for men in this country to become monks for a short period of their lives. This nation is bordered to the Southwest by the Cardamom Mountains, home to the only significant population of many endangered species like the clouded leopard and pleated gibbon. To the east of the Cardamoms lies this country's largest freshwater lake, the (*) Tonle Sap.

The Theravada Buddhism movement repurposed a temple in this nation, and added the word "Wat" to its title. For 10 points, name this home to Angkor Wat, whose capital city is Phnom Penh.

Answer: Kingdom of Cambodia

7. An invasion of this country was condemned by Boniface VIII ["the eighth"] in the Papal Bull *Scimus Fili* [see-muss fee-lee]. Andrew Moray led a rebellion in the northern part of this country in the name of John Balliol. One ruler of this country signed the Treaty of Corbeil, which renewed this country's (*) Auld Alliance with France. That ruler also won the Battle of Bannockburn, and forced Roger Mortimer to recognize this country's independence. Besides Robert the Bruce, another leader of this country fought for independence, and won the Battle of Stirling Bridge. For 10 Points, William Wallace led what country north of England?

Answer: Scotland (accept Alba)

8. A cofactor used in the conversion of this element to a usable form is named FeMoco. The *nif* gene is responsible for producing the enzyme to break down this gaseous element in Frankia. Members of the family Fabaceae host bacteria at their root nodules that can convert this element into a usable form; those bacteria are (*) rhizobia. Cyanobacteria are diazotrophs, meaning they can "fix" this element. This element is converted from an inert, diatomic form to a usable form, ammonium. For 10 points, name this element, the most abundant in the Earth's atmosphere, with atomic number 6 and symbol N.

Answer: nitrogen

9. In one scene from this film, the character Boh is turned into a mouse. In another scene, the protagonist is told to "Finish what you start" after lifting a piece of coal. The character No-Face is first introduced when he gives a character in this film a token for an herbal bath. At the end of this film, (*) Yubaba challenges the main character to pick two specific pigs, to which the protagonist responds to by picking none. For 10 points, name this Miyazaki film which follows Chihiro's attempt to rescue her parents.

Answer: Spirited Away (accept Sen to Chihiro no Kamikakushi; accept Sen and Chihiro's Spiriting Away)

10. This poet wrote "Rowing in Eden/Ah the sea!" and related that "Landlords turn the drunken Bee/Out of the Foxglove's door" and that "Not all the Frankfort Berries/Yield such an Alcohol!" in poems titled "Wild nights-Wild nights!" and "I (*) taste a liquor never brewed." The speaker "passed the School, where Children strove" in a carriage that "held but just Ourselves-And Immortality." in a poem whose title figure "kindly-stopped for me." She compared the stillness of the air to the stillness of the room in another work. For 10 points, name this author of "Because I Could Not Stop for Death" and "I Heard A Fly Buzz When I Died", who was known as the "belle of Amherst."

Answer: Emily Elizabeth Dickinson

11. After police raided a speakeasy in this city, angry patrons started the 12th Street Riot. Those riots, which occurred in 1967, saw the National Guard go into this city after being ordered by George Romney. In another incident in this city, unemployed workers march on this its suburb of (*) Dearborn, and were shot. The largest company this city is headquartered in the Renaissance Center. The United Autoworkers of America operates out of this city, due to the presence of The Big Three. For 10 points, name this home to General Motors, the largest city in Michigan.

Answer: Detroit, Michigan

12. This thinker included described his interest in Gnosticism in *Seven Sermons to the Dead*, which appeared in his autobiography *Memories, Dreams, Reflections*. He formulated a concept where two ideas are related, but not causally related, and his book *Psychological Types* was used as the basis for the (*) Myers-Briggs personality test. He introduced the sage, animus, and anima, which he termed archetypes, and coined the terms introvert and extrovert. For 10 points, name this Swiss thinker who coined the term "synchronicity" and described the collective unconscious.

Answer: Carl Friedrich Jung

13. The United States government attempted to mediate this conflict at the Lackawanna conference. While victorious at the battle of Iquique during this war, Admiral Miguel Grau died and his ship, the Huascar, was captured at the battle of (*) Angamos. This war began with a disagreement between Mariano Prodo and Hilarion Daza over taxation promises established four years prior. Fought over control of guano and saltpeter in that Atacama desert, for 10 points, name this war where Chile defeated Peru and Bolivia, ending Bolivia's access to this war's namesake ocean.

Answer: The War of the Pacific (accept The Pacific War or Saltpeter War before it is read)

14. Eisenstein's criterion is a method of checking if a polynomial has roots in this set. A diagonal listing of the members of this set can show that it has cardinality equal to that of the natural numbers, and to that of the integers. The output of the sine function is this type of number only for quadrantal angles and the 30 degree reference angle, and the square root of a (*) non-perfect square integer cannot be this type of number. For 10 points, name this class of numbers that does not include pi, but does include all numbers that have repeating decimal expansions and that can be expressed as a fraction of two integers.

Answer: rational numbers

15. The final piece in this collection begins with an *allegro non molto* section in which the F minor melody appears in four *ritornelli*. One work in this set includes a notation marking that "the drunkards have fallen asleep." In its second movement *largo*, the first piece in this set depicts a snoozing shepherd and a barking dog; in another section, *pizzicato* strings illustrate (*) chattering teeth. Comprising the first third of *The Contest Between Harmony and Invention*, this set of works includes sonnets written by the composer, the first of which is "La primavera." For 10 points, name this set of violin concerti written by Antonio Vivaldi to depict autumn, spring, summer, and winter.

Answer: The Four Seasons (accept Le quattro stagioni; prompt on "The Contest Between Harmony and Invention" before mentioned)

16. In this work, a character with a mulberry birthmark is frightened by a serpent and disappears early in this novel, though his relative Henry still hangs out with Percival and Johnny, two of the littluns. A vote in this novel decides whether the group believe in ghosts, and another vote is lost by a candidate who can sing C sharp. A dead (*) parachutist is found by Simon after he has a vision of a sow's head talking to him, and in this novel, the conch shell is smashed when Roger kills Piggy. Ralph and Jack vie for control in, for 10 points, what William Golding novel about a group of boys stranded on a deserted island?

Answer: Lord of the Flies

17. This band says the "public don't dwell on my transmission, because it wasn't televised" in their song "Spaceman." In another song, this band asks, "Can we climb this mountain? I don't know" and notes that "He doesn't look a thing like Jesus." In another song by this band, "Anything goes/But don't blink you might miss." The title character of one of their songs is (*) "falling asleep, and she's calling a cab. While he's having a smoke, and she's taking a drag." In that song by this band, jealousy is "turning saints into the sea." For 10 points, name this band of the album *Hot Fuzz*, on which their songs *Somebody Told Me* and *Mr. Brightside* appear.

Answer: The Killers

18. In one of this author's novels, Vera falls in love with the tutor Aleksei Belyaev. Natalya Petrovna appears in that novel by him, *A Month in the Country*. The characters Khor and Kalinych appear in his collection that includes "Lgov," "District Doctor," and "Raspberry Water," *A Sportsman's Sketches*. Another of his novels takes place on the estate of Katya's sister, Madame Anna (*) Odinstova. In that novel by this author, Fenichika is the subject of a duel between Pavel and the protagonist. For 10 points, name this author who wrote about Arkady Kirsanov and his nihilist friend Yevgeny Bazarov in *Fathers and Sons*.

Answer: Ivan Sergeyevich Turgenev

19. **A nickel example of these materials is used in the production of cyclohexane from benzene. Another one of these materials is sometimes poisoned with lead, and consists of calcium carbonate with palladium deposited on it. That one of these materials is used to produce alkenes from alkynes, and is named for (*) Lindlar.** The Fischer esterification typically uses an acid as a reactant and as one of these, and in the Haber process, iron is typically used as one. Enzymes are biological examples of these species, which don't get used up in reactions but do lower the activation energy of reactions. For 10 points, name these species that allow reactions to proceed at a faster rate than they typically would.

Answer: catalyst (accept word forms like catalysis)

20. **This man waged a war to restore Hilderic to the throne after he was deposed by his cousin Gelimer. That conflict ended after one of this man's generals defeated Gelimer at the Battle of Tricamarum. Besides the Vandalic War, this man also fought a war with (*) Khosrau I, which he ended after paying 11,000 pounds of gold and establishing an "eternal peace."** One revolt against this man ended when his general Belisarius slaughtered thousands at the Hippodrome. For 10 points, name this Byzantine Emperor who survived the Nika Riots and was married to Theodora.

Answer: Justinian I (accept Justinian the Great prompt on "Justinian")

Bonuses

1. For 10 points each, answer some questions about castles.

[10] This oldest occupied castle in Europe was remodeled by architect Hugh May. Charles II ordered May to add a Royal Chapel to this castle during the remodel.

Answer: Windsor Castle

[10] Another castle in the United Kingdom is this Scottish castle located on Castle Rock. This castle shares its name with the capital of Scotland.

Answer: Edinburgh Castle

[10] This castle in Germany is the basis for Disneyland's Sleeping Beauty castle. Commissioned by Ludwig II of Bavaria, this castle embraced themes of Richard Wagner and Castle Romanticism

Answer: Neuschwanstein [NOY-shvon-shline, but be lenient) Castle (accept Schloss Neuschwanstein; accept New Swanstone Castle)

2. This deity is the daughter of Izanagi. For 10 points each,

[10] Name this sun goddess who lost an attendant when her brother Susano'o threw a flayed horse at her.

Answer: Amaterasu

[10] Amaterasu is the one of the kami of this animistic Japanese religion.

Answer: Shinto

[10] After her fight with Susano'o, Amaterasu was given the sword Kusanagi. Kusanagi, along with two other objects, form this collection of items that Amaterasu passed down to Ninigi.

Answer: Imperial Regalia of Japan (accept Three Sacred Treasures of Japan)

3. This quantity is transferred by convection, conduction, and radiation. For 10 points each:

[10] Name this measure of energy, abbreviated q , the focus of thermodynamics

Answer: heat

[10] These devices are used to quantitatively measure heat transfer. The "bomb" type is a constant-volume one, and an isobaric one can be constructed in classrooms using two coffee cups.

Answer: calorimeter

[10] According to this law, the constant volume heat capacity is equal to about 3 times the ideal gas constant for most crystalline solids. The Einstein model and the Debye model both recover this law at high temperatures.

Answer: Dulong-Petit law

4. This thinker addressed envelopes to a medical institute, an individual, and a groups called "Friends of the Nazi Party" and "Friends of the Communist Party," then "abandoned" them to be mailed, or not, by those who found them. For 10 points each,

[10] Name this psychologist from Yale University, whose "lost letter" experiment showed prejudice against "undesirable" groups.

Answer: Stanley Milgram

[10] Milgram is best known for studying this concept in an experiment where he instructed a "teacher" to give electric shocks in response to wrong answers from a "learner."

Answer: obedience

[10] Milgram's obedience experiment sought to answer whether the claim that this Nazi, an architect of the Holocaust who was brought to trial in Israel in 1961, was simply "following orders."

Answer: Adolf Eichmann

5. This character works with Turkey, and dies in prison at the end of the story he appears in. For 10 points each,
[10] Identify this character, a “Scrivener.” He repeatedly tells his employer “I would prefer not to” when asked to work.

Answer: **Bartleby**, the Scrivener

[10] In this Herman Melville novel, Starbuck, Queequeg, and Ishmael are aboard Captain Ahab’s ship, the Pequod. It begins with the narrator saying “Call me Ishmael.”

Answer: **Moby Dick**; or, The Whale

[10] Melville also wrote this novella about the title foretopman who accidentally kills John Claggert. Captain Vere convinces the jury to convict the title character of this novel.

Answer: **Billy Budd**

6. Other than the two smallest examples, these numbers are congruent to either 1 or 5, modulo 6. For 10 points each,
[10] Name this set of numbers, which are only evenly divisible by themselves and 1.

Answer: **prime** numbers

[10] Let p be a prime number greater than 3; now, consider $p^2 - 1$. This is the largest number guaranteed to be a factor of $p^2 - 1$.

Answer: **24**

[10] The fact that $p^2 - 1$ is divisible by 24 can be proved using this theorem that solves congruences of coprime moduli using their least common multiple. This theorem was first described by Sun Tzu roughly 1,600 years ago.

Answer: **Chinese remainder** theorem (for reference: no, it's not the same Sun Tzu who wrote *The Art of War*)

7. This strike destroyed the Amalgamated Association of Iron and Steel Workers For 10 points each,

[10] Name this strike in which workers, disgruntled with being locked out of their plant, marched on Carnegie Steel.

Answer: **Homestead** Strike

[10] In an attempt to protect the plant, this detective agency was hired to provide security. This agency’s forces surrendered after a failed attempt to leave their barges.

Answer: **Pinkerton** Detective Agency

[10] During the Homestead strike Alexander Berkman attempted to assassinate this man. This man, Carnegie's plant manager, was responsible for hiring Pinkerton’s.

Answer: Henry Clay **Frick**

8. This play is subtitled “the Moor of Venice.” For 10 points each,

[10] Identify this Shakespeare play, whose title character believes that his wife, Desdemona, slept with one of his fellow officers.

Answer: The Tragedy of **Othello**, the Moor of Venice

[10] This character warns Othello that jealousy “is the green-eyed monster which doth mock.” This husband of Emilia tricks Othello.

Answer: **Iago**

[10] Iago tricks Othello into believing that this character has slept with Desdemona. This character gives a speech about losing his reputation after fighting Montano.

Answer: **Michael Cassio** (accept either or both underlined names)

9. Identify the following jazz musicians for 10 points each.

[10] This trumpeter, known as “Satchmo,” won a Grammy for singing “Hello Dolly,” and also recorded “What a Wonderful World.”

Answer: Louis **Armstrong**

[10] Saxophonist Paul Desmond played in this jazz pianist’s quartet, recording songs like “Pick Up Sticks” and the track “Take Five,” which Desmond wrote for this man's album *Time Out*.

Answer: Dave **Brubeck**

[10] On a 1959 album featuring the song “All Blues,” Paul Chambers played bass, Jimmy Cobb played drums, and Miles Davis played trumpet; this man played alto saxophone.

Answer: Julian “Cannonball” **Adderley**

10. Plants utilize carbon dioxide and sunlight in order to make this type of molecule. For 10 points each,
[10] Photosynthesis produces this class of compounds which include cellulose and starch. They consist of carbon, hydrogen and oxygen atoms.

Answer: **carbohydrates**

[10] When plants need energy, they are able to use this process in order to break down carbohydrates into usable carbon forms. Its “aerobic” type includes the Krebs cycle and oxidative phosphorylation.

Answer: cellular **respiration**

[10] In cellular respiration, this compound and carbon dioxide are produced from pyruvate in the step directly preceding the Krebs cycle. In the Krebs cycle, this compound combines with oxaloacetate to form citrate.

Answer: **acetyl-Coenzyme A**

11. This author is very upset after George Bush wins the 2004 Presidential race, and appears in *God Bless You, Dr. Kevorkian*. For 10 points each,

[10] Identify this fictional science fiction author. Billy Pilgrim is introduced to this fictional author’s works by Eliot Rosewater.

Answer: **Kilgore Trout** (accept either or both names)

[10] This American author created Kilgore Trout. He also wrote about Billy Pilgrim becoming “unstuck in time” in his anti-war novel, *Slaughterhouse-Five*.

Answer: Kurt **Vonnegut**

[10] In this Vonnegut novel, the Pontiac dealer Dwayne Hoover is obsessed with the works of Kilgore Trout. Later in this novel, Hoover bites Kilgore Trout, and beats his gay son Bunny.

Answer: **Breakfast of Champions**

12. This company’s Playstation Network has been hacked multiple times. For 10 points each,

[10] Identify the company that was hacked in November, 2014, resulting in the online leak of several of its films, such as *Annie*.

Answer: **Sony** Films

[10] North Korea claimed to hack Sony due to being upset over this film, whose release was almost canceled after the hacking. It stars James Franco and Seth Rogen.

Answer: The **Interview**

[10] This Sony executive sent racially insensitive emails to Scott Rudin, suggesting that President Obama would enjoy the films *Django Unchained* and *The Butler*.

Answer: Amy **Pascal**

13. These figures were imprisoned after losing their war against the Olympians. For 10 points each,

[10] Name these mythological figures who include Atlas and Cronos.

Answer: **Titans**

[10] After their defeat in the Titanomachy the Titans were imprisoned in this portion of Hades. This deep pit also holds non-titans such as Sisyphus.

Answer: **Tartarus**

[10] Tartarus is guarded by these former inhabitants. These figures known for a strength that surpassed even the Titans, and for their large number of a certain appendage.

Answer: **Hekatonkheires** (accept **Hecatoncheires**; accept **Hundred-Handers** or **Hundred-Handed** Ones)

14. The first one of these happened in 1970, following the merger between the NFL and AFL For 10 points each,

[10] Name this event in which teams from the National Football League select college players to sign. The last person selected during this event is given the title “Mr.Irrelevant”

Answer: NFL **Draft**

[10] This quarterback was selected first overall in the 1983 Draft. Using his baseball skill, and as a result the ability to sign with the MLB, this man refused to play for the team that drafted him.

Answer: John **Elway**

[10] John Elway refused to sign with this team. His refusal to play for this team, coupled with an aging stadium, caused this team to move to the midwest, where they now play at Lucas Oil Stadium under coach Chuck Pagano.

Answer: **Baltimore Colts** (accept either underlined word; accept **Indianapolis** instead of “Baltimore”)

15. Before this battle, King Muwatalli II gathered many allies. For 10 points each,
[10] Name this battle in which Hittites were commanded by Hattusili III and clashed with Egyptian forces. This battle is considered the largest chariot battle in history and also led to the signing of the oldest treaty in recorded history.

Answer: Battle of **Kadesh**

[10] The Battle of Kadesh was instigated by this Egyptian pharaoh. This ruler was married to Nefertari and constructed many temples.

Answer: **Ramses II** (accept **Ramses the Great**; prompt on “Ramses” alone)

[10] Ramses the II created two temples at this location in order to celebrate his victory at Kadesh. After the construction of Aswan High Dam, the temples at this location were relocated to avoid rising waters.

Answer: **Abu Simbel** (accept **Abu Simbel Temples**)

16. This painting’s sky is allegedly all red and wavy because of the eruption of Krakatoa. For 10 points each,

[10] Identify this painting that shows a man standing on a bridge holding the sides of his face.

Answer: The **Scream** (or **Skrik**, or The **Cry**, The **Scream of Nature**, or Der **Schrei der Natur**)

[10] *The Scream* was painted by this Norwegian artist.

Answer: Edvard **Munch** [moonk]

[10] Munch painted this work, part of his *Frieze of Life*, which shows a woman with red hair embracing a man in black.

Answer: **Vampire**

17. This kingdom defeated the British at the Battle of Isandlwana. For 10 points each,

[10] Name this kingdom, consisting of a namesake ethnic group, that lead by Shaka.

Answer: **Zulu** Empire

[10] The Zulu under Shaka invented this formation. This formation was named for an animal and featured a main group of warriors on the front lines and two smaller groups of warriors used for flanking.

Answer: **Buffalo Horns**

[10] At the Battle of Blood River, the Zulu fought the Voortrekkers. The Voortrekkers which were composed of these people. This people’s name comes from the Dutch word for farmer, and would later fight the British in two namesake wars.

Answer: **Boers**

18. In addition to owning a moose that got intoxicated at parties, this author of *De nova stella* observed his namesake supernova in 1572. For 10 points each,

[10] Identify this astronomer who made very accurate measurements of the stars, which his assistant found very useful. This astronomer also invented a hybrid planetary system between the Copernican and Ptolemaic systems.

Answer: Tycho **Brahe**

[10] This assistant of Tycho Brahe formulated three laws of planetary motion. His first law states that the planets move in elliptical orbits, and he also observed a namesake supernova in 1604.

Answer: Johannes **Kepler**

[10] Kepler’s third law states that the ratio of the square of the period and the cube of this quantity remains constant for all planets. For an ellipse, this quantity is the distance from the center to the farthest point away from the center.

Answer: **semi-major axis**

19. In this novel, the protagonist intentionally contracts syphilis from Esmeralda. For 10 points each,

[10] Identify this novel narrated by Zeitblom. It is about the composer Adrian Leverkühn, who makes a deal with the devil to be a genius for twenty four years.

Answer: **Doktor Faustus**

[10] In this novel by the author of *Doktor Faustus*, Hans Castorp intends to visit his cousin Joachim Ziemssen for a few weeks, and ends up staying in a Swiss Sanatorium for seven years.

Answer: The **Magic Mountain** (accept: Der **Zauberburg**)

[10] This German author wrote *Doktor Faustus*, *Death in Venice*, and *The Magic Mountain*.

Answer: Thomas **Mann**

20. Pablo Picasso was inspired to paint *Guernica* by this war. For 10 points each,

[10] Name this war in which the Francisco Franco led nationalist forces defeated the Republicans and took control of a country on the Iberian peninsula.

Answer: The **Spanish Civil War**

[10] Many Americans volunteered to fight for the Spanish Civil War and formed this brigade. This brigade would later merge with one named for George Washington.

Answer: **Abraham Lincoln** Brigade

[10] At the outbreak of the war the Spanish Republic transferred large amounts of this substance to Moscow. That transfer became strong propaganda for the Nationalists.

Answer: **Gold**