



# IMSANITY 2

January 14, 2012

## -ROUND 2-

### Editors

Noah Prince  
Webster Guan  
Adam Kalinich  
Nolan Maloney  
Eric Ordonez

### Writers

Webster Guan	Megan Chen
Adam Kalinich	Brian Chien
Sabrina Lato	Lael Costa
Nolan Maloney	Jacob Kronenberg
Eric Ordonez	Ross Skelly
Noah Prince	
Saieesh Rao	

## Tossups

- (1) To measure the thermal voltage of a semiconductor, this man's namesake constant is multiplied by temperature and divided by the elementary charge. In his studies of gases, he developed the formula that relates entropy to the natural log of the number of possible microstates and his namesake constant. He names a probability distribution that describes the speeds of individual particles in a gas with Maxwell, and pressure of a gas is given by the number of moles times temperature times his namesake constant. For ten points, name this scientist whose constant "k" is applied in statistical thermodynamics.

**ANSWER:** Ludwig Boltzmann

- (2) One of this author's characters who sails to Buyan in a barrel, Prince Gvidon, saves a swan who turns out to be a princess in *The Tale of Tsar Saltan*. This writer's adaptation of *Don Juan* is titled *The Stone Guest*, which is part of his collection of "Little Tragedies." In a poem by this man, Evgenii loses his love Parasha to a storm, and curses a statue of Peter the Great which comes to life to kill him. This poet of "The Bronze Horseman" created a title character who flirts with Olga, rejects and falls in love with Tatyana, and accidentally kills Vladimir Lensky in a duel. For ten points, name this Russian author of *Boris Godunov* and *Eugene Onegin*.

**ANSWER:** Aleksandr Pushkin

- (3) This band promised "Well, here's a poke at you/You're gonna choke on it too/You're gonna lose that smile" in its only Top 10 Billboard hit, and in another song this band asserted "I hope I die before I get old" and pleaded for "you all" to "fade away" and "don't try to dig what we all s-s-say". In addition to *I Can See for Miles* and *My Generation*, this band sang of a boy who "ain't got no distractions/Can't hear those buzzers and bells" in their opus about a talented "deaf, dumb, and blind kid", *Pinball Wizard*. The performers of the rock opera *Tommy* are, for ten points, this band featuring Keith Moon, Pete Townshend, and Roger Daltrey.

**ANSWER:** The Who

- (4) This artist sculpted an intoxicated Greek god holding a goblet and standing next to a faun in his *Bacchus*. This artist also created a sculpture of a bearded and horned man sitting with his right knee exposed and clutching two tablets in his *Moses*. This man depicted Mary holding her left hand open with the limp body of Jesus in her lap in the only sculpture he ever signed. In another piece, which stands seventeen feet tall, this artist portrayed a nude man in counterpose looking intently into the distance and carrying a sling over his shoulder. For ten points, name this Italian Renaissance sculptor of *La Pieta* and *David*.

**ANSWER:** Michelangelo di Lodovico Buonarroti Simoni

- (5) Stewart Udall pushed for many of its reforms, including the Endangered Species Preservation Act and the National Historic Preservation Act. Its creator first outlined this idea at a University of Michigan commencement speech, and several parts of it were taken from his predecessor's "New Frontier." The National Endowment for the Arts and Humanities and National Public Radio were established as part of this initiative. According to legend, its creator said "We have lost the South for a generation" as he signed a piece of legislation included in this initiative, the Voting Rights Act. For ten points, name this initiative that included a "War on Poverty" in which Lyndon Johnson established Medicare and Medicaid.

**ANSWER:** Great Society

- (6) One author from this country wrote a "factless autobiography" signed under the heteronym Bernardo Soares, *The Book of Disquiet*. Another author from this country wrote about a character who dies after putting on a jacket and following the author of *The Book of Disquiet* to the graveyard. Another work from this country is about the conquest of India by heroes who were protected by Venus. This country's author of *The Year of the Death of Ricardo Reis* also wrote a novel in which everyone except the doctor's wife is afflicted by the titular condition. The home of the authors of the *Luciades* and *Blindness*, for ten points, name this home country of Fernando Pessao, Luis de Camões, and Jose Saramago.

**ANSWER:** Portugal

- (7) The idol for the Lapp analog of this figure has a metal nail in its head. He visited the seeress Groa to ask her to remove a whetstone from his head earned while fighting the giant Hrungnir. One myth about him tells of how he went fishing with the giant Hymir and caught a large serpent, but let it loose. This figure was unable to lift a giant's cat, which was really the aforementioned serpent, Jormungandr, in disguise. This deity tricked Alvis and turned him into stone, and will kill and be killed by the Midgard Serpent at Ragnarok. For ten points, name this ginger wielder of the magic hammer Mjollnir, the Norse god of thunder.

**ANSWER:** Thor

- (8) A sinfonia commemorating the "Arrival of the Queen of Sheba" opens Act 3 of this composer's musical adaptation of biblical stories of Solomon. The final movement of his *Air and variations* suite features double variations in the alternating hands and then triplets in both hands together. In addition to *The Harmonious Blacksmith*, this composer worked extensively in the service of King George I, producing such works as *The Music for the Royal Fireworks* and a set of three suites first performed on the Thames. Besides *Water Music*, his most famous oratorio features the aria "I know that my redeemer liveth" and proclaims the glory of God in the "Hallelujah" chorus. For ten points, name this Baroque composer of the *Messiah*.

**ANSWER:** George Frideric Handel

- (9) One leader of this country crushed the PKI, who were accused of leading a coup, and founded the “New Order”. The 1955 Bandung Conference that led to the non-aligned movement occurred in this country. Srivijaya and Mataram were early empires in this modern-day country. Pancasila was developed by this nation’s first vice-president, Mohammed Hatta, and “Guided Democracy” was invented by this nation’s first president, Sukarno. East Timor gained independence from this country in 2002, four years after the resignation of Suharto. For ten points, name this Southeast Asian nation made up of islands including Java, Sumatra, and Borneo.

**ANSWER:** Indonesia

- (10) A consequence of this phenomenon is the high incidence of Huntington’s disease in the population of the Afrikaners in South Africa. One disease associated with this phenomenon is Ellis-van Creveld syndrome, which causes polydactyly, heart defects, and dwarfism, and is presented highly in Amish populations. This effect led to the famously high deaf population on Martha’s Vineyard. Contributing to evolution and a specific case of genetic drift, for ten points, name this effect which occurs when a new community is established by colonists with a non-random gene sample.

**ANSWER:** Founder effect (prompt on “natural selection”, prompt on “genetic drift” before mention)

- (11) Charles IV established the rules of succession for this polity. Its founder defeated a revolt by his son Liudolf and won the Battle of Lechfield against the Magyars. Another ruler of this entity was involved in an investiture controversy and had to beg for forgiveness for three days at Canossa. The Golden Bull of 1356 enumerated its three spiritual and four temporal electors. The Peace of Augsburg added Lutheranism as an official religion of this empire and Calvinism was added with the Peace of Westphalia. For ten points, name this political entity first led by Henry IV and Otto I that spanned Burgundy, Northern Italy, and Germany.

**ANSWER:** Holy Roman Empire of the German Nation (do not prompt on or accept “Germany”)

- (12) This kind of curve can be drawn using the trammel of Archimedes. A beam fired from one focus of this curve will reflect off of it toward the other focus, which is the basis of the design of whispering galleries. This curve is defined as the set of all points for which the sum of the distances to two fixed points is constant. The area enclosed by these curves can be computed as one-fourth pi times the product of their major and minor axes. For ten points, name this type of conic section which has an eccentricity less than one, of which circles are a special example.

**ANSWER:** ellipse

- (13) This novel sees the Cole family's party in Highbury, at which Colonel Campbell or Mr. Dixon is believed to be the sender of an anonymous gift of a piano. Miss Taylor's marriage to Mr. Weston inspires the protagonist to set up Weston's son with her friend after that friend is rejected by Mr. Elton. One character in this novel is saved from a group of gypsy beggars after a ball by Frank Churchill, who is secretly engaged to Jane Fairfax. Harriet Smith accepts the second proposal of Robert Martin in, for ten points, which novel that ends with Mr. Knightley marrying the titular Miss Woodhouse written by Jane Austen?

**ANSWER:** Emma

- (14) While shipwrecked on Malta, this man survived a venomous snake bite and healed the father of Publius. He wrote that circumcision was not necessary for Christians, and pushed to remove much of Torah law from Christianity. This man, who was accompanied by Barnabas on many of his journeys, participated in the stoning of Saint Stephen. This man was asked "Why do you persecute me?" by a voice and temporarily blinded while on the road to Damascus, prompting his conversion to Christianity. For ten points, name this native of Tarsus, an early Christian whose epistles include Romans and Corinthians.

**ANSWER:** St. Paul of Tarsus (or Saul)

- (15) In 2009, a program to "enhance" this language through "an assortment of small changes" was created under the name Project Coin. To combat slow performance, this language introduced just-in-time compilation to its version 1.1; however, built-in garbage collection continues to make this language slower than its predecessors. This language was once called Oak, and was marketed with the slogan "write once, run anywhere", touting the portability it sees from running its programs in a namesake virtual machine in the form of bytecode. A rival to C++, for ten points, name this object-oriented programming language developed by Sun Microsystems.

**ANSWER:** Java (do not prompt on or accept "Javascript")

- (16) One of his earliest lineups sought to achieve a sound like the human voice and included a French horn and a tuba; that nonet gave rise to the "cool jazz" movement. Together with Gil Evans, he arranged jazz versions of the *Concierto de Aranjuez* and "Will o' the Wisp" on the album *Sketches of Spain*. John Coltrane performed with this musician's first quintet on an album based entirely on modality, and some of his most popular songs from that album include "Freddie Freeloader" and "So What". For ten points, name this jazz trumpeter whose acclaimed albums include *Birth of the Cool*, *My Funny Valentine*, and *Kind of Blue*.

**ANSWER:** Miles Davis

- (17) The Scottish Admiral Grieg won the battle of Cheshme, allowing this ruler to sign the Treaty of Kuchuk Kainarji. A number of fake villages in Ukraine were created by Grigory Potemkin to impress this ruler. This ruler created the League of Armed Neutrality to defend shipping to the Americas, and defeated the Bar Confederation and the Kościuszko Uprising. This ruler put down a rebellion by Pugachev, who claimed to be this ruler's dead spouse. Grigory Orlov helped this ruler lead a coup against that spouse, Peter III. A sponsor of Voltaire and Diderot, for ten points, name this enlightened Empress of Russia.

**ANSWER:** Catherine II or Catherine the Great

- (18) Von Neumann extended this concept to quantum mechanics by relating it to Boltzmann's constant and the trace of the product of the density matrix with the log of the density matrix. The Clausius inequality can be used to show that the change in this quantity is greater than or equal to  $Q$  over  $T$ . The change in Gibbs free energy is equal to the change in enthalpy minus the temperature multiplied by the change in this quantity, and the Second Law of Thermodynamics implies that all spontaneous processes result in an overall increase in this quantity. For ten points, name this quantity seen as a measure of disorder in a system, symbolized  $S$ .

**ANSWER:** entropy

- (19) One section of this book describes throwing a child over a house and running to catch her, so that she can learn the feeling of flying. It breaks spells into the "u'ula", foundation, "tapwana", surface, and "dogina", tip, and describes the building of a canoe in preparation for a ceremony in which necklaces are given in return for armbands and vice versa. The introduction of this book describes the need of ethnography to methodologically detail savage races. Like its sequels *The Sexual Life of Savages in Northwestern Melanesia* and *Coral Gardens and their Magic*, it follows the Trobriand Islanders. For ten points, name this book which analyzed the Kula ring, a work by Bronislaw Malinowski.

**ANSWER:** Argonauts of the Western Pacific

- (20) This author wrote a work set in Quebec about Cecile Auclair, who marries Jacques in the epilogue, entitled *Shadows on the Rock*. This author also wrote a novel in which Thea Kronburg moves to Chicago to pursue opera, and another revolving around Jean Marie Latour and his diocese in New Mexico. Yet another of her works concerns Claude Wheeler, who dies fighting in World War I. This author of *The Song of the Lark*, *One of Ours*, and *Death Comes for the Archbishop* is most famous for a work in which Jim Burden explores his feelings for the titular Bohemian immigrant. For ten points, name this author of *My Antonia*.

**ANSWER:** Willa Cather

- (21) The Frisian Island chain ends in the southwest of this country, and this nation's other islands of Sjaelland [ZHEH-land] and Fyn lie in the Kattegat. This nation, which controls the Faroes, is bounded to the north by the Skaggerrak. This nation sold the Virgin Islands to the United States, and the Kiel Canal connects the North Sea to the Baltic via Germany to this nation's south. The Battle of Jutland took place in the North Sea west of this nation. Malmo, Sweden, is connected by bridge to, for ten points, this nation controlling Greenland with capital at Copenhagen.

**ANSWER:** Denmark

## Bonuses

- (1) The area occupied by this country was given to France in the Treaty of Ryswick in 1697, from which Spain took the other two-thirds of Hispaniola. For ten points each:



[10] Name this country originally called Saint-Domingue, and which was also struck by a 7.0-magnitude earthquake in January 2010.



**ANSWER:** Haiti

[10] One of the only successful slave revolts ever was of the Haitians against the French. The revolt began in 1791, and was led by this man, who, in 1801, proclaimed himself the autonomous governor of the newly created nation.

**ANSWER:** Toussaint L'Ouverture

[10] Haiti has remained a free and independent nation, but some of its rulers were corrupt, like this man who used a private army called the Tontons Macoutes to support him through force. He ruled from 1951 until his death in 1971.

**ANSWER:** François Duvalier

- (2) The super ones of these include  $\text{FSO}_3\text{H}$  and the magic variety. For ten points each:



[10] Name these substances which come in varieties such as formic, nitric, and hydrofluoric and have values less than seven on the pH scale.



**ANSWER:** acids

[10] This kind of acid includes boron trifluoride and the sodium and magnesium ions. They are electron deficient, and as a result, attract nucleophiles.

**ANSWER:** Lewis acids

[10] This classification theory of acids and bases defines them in terms of their abilities to donate or accept hydrogen ions.

**ANSWER:** Bronsted-Lowry Theory

- (3) Tchaikovsky never really got along well with any of them. For ten points each:



[10] Name this circle of composers based in St. Petersburg that sought to create a specifically Russian style of music instead of imitating older European styles. It was headed by Mily Balakirev.



**ANSWER:** The Five or The Mighty Handful (or The Mighty Coterie)

[10] One member of the Five was this composer often inspired by Russian history and folklore, which can be seen in his opera *Boris Godunov* and the symphonic poem *Night on Bald Mountain*.

**ANSWER:** Modest Mussorgsky

[10] Each member of the Five was directly influenced by this “father of Russian classical music”. He is most known today for an opera based on a poem by Pushkin, *Ruslan and Lyudmila*.

**ANSWER:** Mikhail Glinka



- (4) He smokes a pipe made by Kapp and Peterson, and later this character goes blind between acts. For ten points each:



[10] Name this character who instructs another character who is being held on a leash to “think,” which results in a long, nonsensical monologue about “the works of Puncher and Wattman” and “labors of Fartov and Belcher.”



**ANSWER:** Pozzo

[10] Pozzo appears in this two-act “tragicomedy” which begins with the setting “A Country Road. A Tree. Evening” and features Vladimir and Estragon’s fruitless attempts to meet up with the title figure.

**ANSWER:** Waiting for Godot (or En attendant Godot)

[10] *Waiting for Godot* is a play by this absurdist Irish playwright, who also wrote about two characters that live in trash cans in *Endgame*.

**ANSWER:** Samuel Beckett

- (5) (MODERATOR NOTE: Do NOT read “Gödel’s” if it is not given in the answer to Part 2, as it gives the answer to Part 3.)



The theory of these entities forms a branch of mathematical logic begun by David Hilbert.



For ten points each:

[10] Name these mathematical entities, rigorous deductive arguments demonstrating the truth of a statement.

**ANSWER:** proof

[10] This theorem states that in any system of arithmetic, there are true statements for which no proof exists to assert their validity.

**ANSWER:** Gödel’s Incompleteness Theorem

[10] This Austrian logician and member of the Vienna School proved the Incompleteness Theorem before working on such problems as the Continuum Hypothesis and the Independence of the Axiom of Choice.

**ANSWER:** Kurt Friedrich Gödel

- (6) Crispus Attucks was among the five casualties, and Paul Revere made a pamphlet about it.



For ten points each:

[10] Name this 1770 incident where British soldiers fired on a colonial mob.



**ANSWER:** Boston Massacre

[10] Robert Treat Paine led the prosecution of the British soldiers and this future president led the defense, getting them acquitted of murder.

**ANSWER:** John Adams

[10] The Boston Massacre occurred during the first year of this British Prime Minister’s government. He led Britain through most of the American Revolution, and eventually resigned after the defeat at Yorktown.

**ANSWER:** Lord Frederick North, 2nd Earl of Guilford

- (7) It is set in the fictional district of Kyauktada, and Elizabeth shoots a pigeon and John Flory shoots a leopard in this work. For ten points each:



[10] Name this work about U Po Kyin's attempts to destroy Dr. Veraswami's reputation.



**ANSWER:** Burmese Days

[10] In this other work by the author of *Burmese Days*, Winston Smith works in the Ministry of Truth and Syme is vaporized.

**ANSWER:** 1984

[10] This is the author of the aforementioned works, who also wrote about Gordon Comstock in *Keep the Aspidistra Flying*.

**ANSWER:** George Orwell (or Eric Arthur Blair)

- (8) In November 2011, over a million Muslims made a pilgrimage to Mecca. For ten points each:



[10] This is the Arabic term for the pilgrimage. The Five Pillars of Islam state that all able-bodied Muslims must perform this once.



**ANSWER:** al-hajj

[10] This is the building inside the Masjid al-Haram that all Muslims face while they are praying. Muslims undergoing hajj ritually kiss the Black Stone inside this cube-shaped building.

**ANSWER:** Kaaba

[10] One aspect of hajj, the Tawaf, involves circling the Kaaba counterclockwise this many times. Another aspect of hajj involves going back and forth between the Al-Safa and Al-Marwah mountains this many times.

**ANSWER:** seven

- (9) The Fosbury flop performed by high jumpers causes this point to pass under the bar, while their body stays over the bar. For ten points each:



[10] Name this point, the average location of the mass of a system. Also referred to as the barycenter, it can be found using plumb bobs.



**ANSWER:** center of mass or center of gravity

[10] This theorem tells that the moment of inertia of an object around a new axis equals an object's moment of inertia through its center of mass plus the product of its mass times the distance to the new axis squared. It is similar to a formula which can find the moments of inertia of an object at right angles to a plane.

**ANSWER:** Parallel Axis theorem (or Huygens-Steiner theorem)

[10] This force, a vector quantity, causes an object to rotate around an axis. It is given by the cross product of the radius vector with the force vector.

**ANSWER:** torque

- (10) His early works depicted the struggles and daily lives of Eastern European Jews. For ten points each:



[10] Name this French-Belarusian artist of *The Fiddler*, *The Circus*, and the stained glass windows at the United Nations Building.



**ANSWER:** Marc Chagall

[10] This Chagall work depicts a green-faced man staring into the eyes of a sheep. A goat being milked is superimposed over the cheek of the larger sheep.

**ANSWER:** I and the Village

[10] This other Chagall work depicts the “White” title act of torture in its center. With a menorah lit in the foreground and a burning synagogue in the background, it is said to represent the violence toward Jews in Europe in the 1930s.

**ANSWER:** crucifixion (accept White Crucifixion)

- (11) The world disappeared for a moment when his wife, Parvati, covered his eyes. For ten points each:



[10] Name that god who sprouted a third eye in his forehead in response to that event. The third deity in the Hindu trimurthi, he serves as the god of destruction.



**ANSWER:** Siva or Shiva

[10] Shiva is said to reside atop this mountain in the Himalayas. Four rivers are said to originate from its four faces, and the highest body of freshwater in world, Lake Manasarovar, lies to its south.

**ANSWER:** Mount Kailash (or Gang Rinpoche)

[10] Shiva is said to have broken this river deities fall from heaven by catching her in his matted hair. This holiest river in India flows past cities such as Varanasi and Allahabad before emptying into the Bay of Bengal.

**ANSWER:** Ganges River (or Ganga)

- (12) Franz, Duke of Bavaria, would be their current claimant if he cared at all. For ten points each:



[10] Name this line of Pretenders begun by James II that included the Old Pretender and Bonnie Prince Charlie.



**ANSWER:** Jacobites (prompt on “Stuarts”)

[10] James II was overthrown and replaced by William III and Mary II during this event. It was provoked by the birth of a son who would be raised Catholic. The Battle of the Boyne sealed the result of this event.

**ANSWER:** Glorious Revolution

[10] The Glorious Revolution was successful, unlike this rebellion that occurred three years previously. Its namesake Duke was executed as part of the Blood Assizes after this rebellion ended at the Battle of Sedgemoor.

**ANSWER:** Duke of Monmouth Rebellion

- (13) This kind of structure is dominated by alpha helices and beta-pleated sheets. For ten points each:



[10] Name this level of protein structure, distinguished from tertiary structure because it only describes the three-dimensional structure of small segments of amino acids, rather than the overall positions of atoms as defined by points in three-dimensional space.



**ANSWER:** secondary structure

[10] These interactions connect every fourth amino acid in alpha helices to maintain the helical shape. They are stronger than Van der Waals interactions and occur between the namesake atom and a nitrogen, oxygen, or fluorine atom.

**ANSWER:** hydrogen bonds

[10] Two hydrogen bonds connect these two nitrogenous bases in DNA. Uracil replaces one of them, and adenosine consists of the other one of these bases attached to a ribose sugar.

**ANSWER:** Adenine and Thymine

- (14) He wrote “Life for me ain’t been no crystal stair” in “Mother to Son”. For ten points each:



[10] Identify this African American poet of “The Negro Speaks of Rivers” and *The Weary Blues*.



**ANSWER:** Langston Hughes

[10] Hughes lived most of his adult life in this New York neighborhood. Other members of its namesake “Renaissance” included Zora Neale Hurston, Claude McKay, and Countee Cullen.

**ANSWER:** Harlem

[10] This Hughes poem begins with the instructor saying “Go home and write a page tonight. And let that page come out of you– Then, it will be true.”

**ANSWER:** Theme for English B

- (15) Many countries are made up of united parts. For ten points each:



[10] This state, part of the United States, is known as “Big Sky Country” and boasts the most glaciers in the lower 48 states. Its capital, Helena, lies on the Missouri River and its highest point is Granite Peak.



**ANSWER:** Montana

[10] This country was home to the United Kingdom’s naval base at Scapa Flow during World War I. The Orkney and Shetland Islands lie to its north.

**ANSWER:** Scotland

[10] In 2009, this member of the United Arab Emirates lent ten billion dollars to Dubai in a massive bailout effort.

**ANSWER:** Abu Dhabi

- (16) Eugene O'Neill's novel *Ah, Wilderness* takes its name from this poet's most famous work, and that work also describes "eternal Saki" being poured into a bowl. For ten points each:
- △ [10] Name this poet who famously wrote of "A Jug of Wine, A Loaf of Bread—and Thou" in his *Rubaiyat*.

▽ **ANSWER:** Omar Khayyam

[10] Omar Khayyam wrote in this language which was also used by Saadi, Hafiz, and the author of *The Book of Kings*, Ferdowsi.

**ANSWER:** Persian (accept Farsi)

[10] This Persian poet and Sufi mystic wrote the poem "Our Death is Our Wedding." He popularized the ghazal form and wrote a collection consisting of 27,000 lines of poetry in six volumes, his *Spiritual Couplets*.

**ANSWER:** Rumi

- (17) Its earliest films dealt with its history, with examples like *The Capture of Rome* and *The Last Days of Pompeii*. For ten points each:

△ [10] Name this country, the home of director Sergio Leone, whose films *The Good, the Bad, and the Ugly* and *Once Upon a Time in the West* are classic examples of spaghetti westerns.

▽ **ANSWER:** Italy

[10] This Italian director won the 1993 Academy Award for Lifetime Achievement. He is best remembered for his films *8 1/2* and one in which Marcello and Sylvia embrace in Rome's Trevi Fountain, *La Dolce Vita*.

**ANSWER:** Federico Fellini

[10] Roberto Benigni acted in and directed this 1997 film in which an Italian Jew tries to keep his son's spirits high while living in a Nazi concentration camp.

**ANSWER:** Life is Beautiful (or La Vita e Bella)

- (18) Identify the following about polynomials for ten points each:

△ [10] This term is given to a value which, when plugged into a polynomial, yields an output value of zero.

▽ **ANSWER:** root (or solution, reluctantly accept zero)

[10] This theorem states that every non-constant polynomial has a complex number as a root. As a consequence, the number of complex roots of a polynomial is equal to its degree, if counted with multiplicity.

**ANSWER:** Fundamental Theorem of Algebra

[10] Called the "Prince of Mathematicians", this German proved the Fundamental Theorem of Algebra in his doctoral dissertation before publishing his seminal book *Disquisitiones Arithmeticae*.

**ANSWER:** Carl Friedrich Gauss

- (19) He painted the *Banquet of the Officers of the St. George Militia Company* and *The Jolly Toper*. For ten points each:



[10] Name this artist who painted *Gypsy Girl*, his first masterpiece.



**ANSWER:** Franz Hals

[10] The titular figure in this Hals work bears the titular smirk and wears a black shirt covered with intricate lacework and a white lace frock.

**ANSWER:** The Laughing Cavalier

[10] Hals was a native of the city of Haarlem in this country. Notable cities in this country include Maastricht, Amsterdam, and The Hague.

**ANSWER:** Netherlands (prompt on “Holland”)

- (20) This work discusses how the author is a “free spirit” who will replace the philosophers of the past, whose prejudices skewed their search for objective truth. For ten points each:



[10] Name this work, subtitled “Prelude to a Philosophy of the Future,” which discusses the



“will to power” and ends with an epode titled “From High Mountains.”

**ANSWER:** Beyond Good and Evil (or Jenseits von Gut und Böse)

[10] In the prologue of this other work by the author of *Beyond Good and Evil*, a tightrope walker falls to his death. This work introduces the idea of the Übermensch and eternal recurrence, and follows the travels of a Persian prophet.

**ANSWER:** Thus Spoke Zarathustra: A Book for All and None

(or Also sprach Zarathustra: Ein Buch für Alle und Keinen)

[10] Name this philosopher who wrote the aforementioned works. He famously proclaimed that “God is Dead” and wrote *The Gay Science* and *Ecce Homo*.

**ANSWER:** Friedrich Nietzsche

- (21) This thinker who wrote the *The Blue and Brown Books* and *On Certainty* introduced the “five red apples” thought experiment. For ten points each:



[10] Name this philosopher who used the example of a “duckrabbit” in his language games



to criticize private language in his *Philosophical Investigations*.

**ANSWER:** Ludwig Wittgenstein

[10] In this work, Wittgenstein presents his picture theory of languages through seven propositions. Two of these propositions are “The world is everything that is the case” and “Whereof one cannot speak, thereof one must be silent.”

**ANSWER:** Tractatus Logico-Philosophicus

[10] This animal “in-a-box” is a thought experiment used by Wittgenstein to refute private language. In that thought experiment, every person has a box, inside of which he believes to be this animal.

**ANSWER:** beetle