

LIMIT 2015: A Limit to Learning is a Dangerous Thing

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Packet 14

Tossups

1) This “nascent” element embrittles metals by entering them. The index of unsaturation is also called the index of this element's deficiency. Alkenes can undergo a reaction with this element using palladium to become alkanes. In some NMR solvents, one atom of this element is replaced with deuterium. Vegetable oils (*) often undergo a reaction named for this element that make them unhealthy. Acidity is determined by scales of the ion of this element. The electrolysis of water forms oxygen and this gas. For 10 points, name this first element.

ANSWER: **hydrogen**; prompt on “H”

2) Government officials treated one character in this novel as imaginary, and they wanted to build a hydroelectric dam on his father's land. One character in this novel, who complains that he is tired, suffered two dents to his skull at birth. That character, Pete Bancini, is a (*) Chronic, and they sit on the opposite side of the Day Room as the Acutes. This novel's main character tries to organize a vote on watching the World Series. This novel's protagonist is smothered to death by Chief Bromden after Nurse Ratched orders a lobotomy on him. Randle P. McMurphy appears in, for 10 points, what Ken Kesey novel set in an Oregon mental asylum?

ANSWER: ***One Flew Over the Cuckoo's Nest*** <DS>

3) CPAP machines provide continuous airflow during this process. A loss of voluntary control over this phenomenon is called narcolepsy. Sudden infant death syndrome is associated with an apnea during this phenomenon, which has parts with varying voltage and frequency. When this process ends, cortisol increases and motor neurons are no longer inhibited, ending (*) paralysis during one of its phases. Hans Berger discovered alpha waves during this process, which involves an increase in melatonin. The morningness–eveningness inventory evaluates its quality. For 10 points, name this process with an REM phase that may include dreaming.

ANSWER: **sleep**; do not accept **dreaming**

4) One ruler built a tank called the “liquid pillar of victory” with this river's water in his capital; that ruler was Rajaraja I. The triangular Doab plain is the ‘land of two rivers’ formed by the Yamuna and this river. The Third Buddhist Council was convened at a city on this river which featured a nine-mile-long wall around it, according to Megasthenes. That city located on this river was Pataliputra, the capital of the (*) Mauryan Empire. The cities of Varanasi and Patna are on its banks, and this river merges with the Brahmaputra in Bengal. For 10 points, name this sacred river of India.

ANSWER: **Ganges** River

5) On the upper right of this work, Saint Cecilia is playing an organ while, on the upper left, the mouths of a group of singing angels are so accurate that the registers each are singing in can be identified. Unusually, this work depicts the Virgin Mary reading a book. Adam and Eve are depicted forlorn and naked in this work, with Eve holding a small (*) citrus fruit. Commissioned by Joost Vijdt, the lower section of this work shows three popes together below an altar holding the Lamb of God. For 10

points, name this massive work of art in the Saint Bavo Cathedral in the namesake Flemish city designed by Hubert van Eyck and painted by his brother Jan.

ANSWER: Ghent Altarpiece or Adoration of the Mystic Lamb; accept The Lamb of God or Het Lam Gods

6) This poet “sought a theme and sought for it in vain,” and “must lie down where the ladders start,” in his work “The Circus Animals’ Desertion.” In another work, he “will arise and go now,” to the title place, where he will build a cabin, “of clay and wattles made,” and included that poem in a collection with his play *The Countess Cathleen*. This poet of (*) “The Lake Isle of Innisfree” states that, “A terrible beauty is born,” in another work. He wrote a poem describing “a rough beast/ Slouching toward Bethlehem to be born. For 10 points, name this Irish poet of “Easter, 1916” and “The Second Coming.”

ANSWER: William Butler Yeats [YATES] <CC>

7) This man signed Terri’s Law and recently resigned from the advisory boards of Academic Partnerships and and Tenet Healthcare. In 1994, his father said, “The joy is in Texas, but our hearts are in” the state this man would later become Governor of. This man coined the term “Grand Solutions Party” and (*) Mike Murphy helps his superPAC Right to Rise. This Governor said that illegal immigration is “not a felony” but “an act of love” and has a logo with an exclamation mark after his first name. For 10 points, name this Florida Governor and brother of George W. Bush.

ANSWER: John Ellis Jeb Bush; prompt on “Bush” and accept J Bush

8) One of this deity’s progeny named Tityus was bound in Tartarus while two vultures tore at his liver. One vase painting shows this deity handing Erichthonius to Athena while surrounded by dancing Panes and half-risen from the ground. In ancient Greece, oaths sworn by this (*) primordial deity were the most binding. The Hesperides were gifted to Hera by this deity. This deity created the flint sickle used by Kronos to castrate his father. Her union with Uranus created both the Titans and the Gigantes. For 10 points, name this primordial deity, the Greek equivalent of Mother Earth.

ANSWER: Gaia or Gaea <KD>

9) The banderia were elite heavy cavalry from this country. The Adriatic port of Zara futilely asked for this country to protect it during the Fourth Crusade. One man created a Central Committee of Citizens in this country, which passed the March laws. Its Prince Géza converted to Roman Catholicism. Chancellor Metternich fled (*) when this country revolted against Franz Josef, and Nicholas I later crushed that 1848 revolt. One settlement combined two capitals within in this country and was called the Ausgleich. This country of Magyars was united with Austria in the Dual Monarchy. For 10 points, name this country with a capital at Budapest.

ANSWER: Hungary

10) The far right of this work has a rendition of a woman resting her head on her bent right arm known as *Meditation*. At the top of this work, three identical men join their heads and hands in pointing downward. One scene within this work shows a nobleman on all fours above his dead children, just before he consumes them. *The Three Shades* and (*) *Ugolino and His Children* are part of this work, which also contains several depictions of Paolo and Francesca da Rimini, such as one in which they hold each other in a close embrace. For 10 points, name this bronze sculpture that contains *The Kiss* and *The Thinker*, created by Auguste Rodin.

ANSWER: *The* Gates of Hell or *La* Porte de l’Enfer <JG>

11) **The thickening and the decreasing heat fluxes of these objects are proportional to the square-root of their age. These objects move around poles of rotation, and along conservative margins. Fracture zones are one explanation for ridge offsets between these objects. Magnetic stripes can form on the tops of these objects, which undergo “spreading”.** (*) Island arcs are found near the boundaries of these objects, which float on the asthenosphere. Active margins between them include the Ring of Fire in the Pacific. For 10 points, name these slabs of land in the lithosphere that have a namesake “tectonics”.

ANSWER: plates

12) **Clifford Geertz studied the double-cropping of this food with coffee in Java, called the “Cultivation System”. Bunded fields using ‘floodwater’ grow this crop, which was collected using “fanners” in Charleston. Acadia Parish made this crop in the 1880s, and it was grown with rubber in Malaysia.** (*) Guangdong province grows it with tea. The “theory of Japaneseness” is based on this staple. Basmati and Jasmine are long-grain varieties of this food. For 10 points, name this food with yellow, brown, and white varieties grown in paddies and terraces.

ANSWER: rice; accept types of rice

13) **In a film written by Marguerite Duras, an architect known as “He” tells an actress about how he lost his family in this event. In a novel set after of this event, finding a suitor for Yasuko is difficult due to the effects of the title phenomenon, *Black Rain*. The title character of another novel set in this event’s aftermath is unable to finish her goal of folding 1,000** (*) paper cranes before dying. *The New Yorker* had an entire issue about a work detailing the stories of six people following the detonation of Little Boy. For 10 points, name this event reflected upon in *Sadako and the Thousand Paper Cranes* as well as in a namesake book by John Hersey.

ANSWER: the atomic bombing of Hiroshima; prompt on partial answers such as “the atomic bombing of Japan”; **do not accept any answer with the word Nagasaki** in it <JG>

14) **At Lothal, these residential structures emptied into underground jars. A “Great” one of these was found on a citadel or acropolis in Mohenjo-Daro. Some of these buildings contained libraries within them, and they were called thermae. Septimius Severus built one of these structures in Constantinople named after Zeuxippus. After going to these places in** (*) Greece, members of both sexes would cover themselves in oil and take refreshments. Roman ones had hot, warm, and cool-water rooms. For 10 points, name these public or private places where people cleaned themselves with water.

ANSWER: baths

15) **The lengthening Bridge of the Separator and the House of Song are landmarks on the way to this place. Particular Judgement refers to an indirect route to this place. The Buddhist one is a temporary place without** (*) eleven types of agony. The Baha’i believe in *this place* on Earth. In the Talmud, there are seven types of this place, and each is governed by an angel. For 10 points, name this place containing a New Jerusalem, where water flows from the Lamb’s and God’s throne.

ANSWER: heaven; accept paradise

16) **This poem was published as part of a competition with a poem that asks “What powerful but unrecorded race/ Once dwelt in that annihilated place.” That poem, by Horace Smith, shares its title with this one, which describes “the hand that mocked them and the heart that fed.” This poem ends by stating that “the lone and level** (*) sands stretch far away,” and it is told to the narrator by “a traveler from an antique land.” This poem describes a pedestal with an inscription to “look on my works, ye Mighty, and despair.” For 10 points, name this sonnet about the temporary nature of glory, a work by Percy Shelley.

ANSWER: "Ozymandias" <CC>

17) **With the first overall pick in the 1968 NBA Draft, this team picked a player who led them to the 1981 Finals in his second tenure with this team, Elvin Hayes. They're not the Clippers, but this team was founded in San Diego. Rudy Tomjanovich coached this team to back-to-back titles in 1994 and 1995, when this team featured (*) Ralph Sampson and Hakeem Olajuwon. Yao Ming played his NBA career for this team, which is coached by Kevin McHale. For 10 points, name this NBA team starring Dwight Howard and James Harden.**

ANSWER: Houston Rockets; accept either or both names; accept San Diego Rockets before "1981" is read <CC>

18) **Cogeneration is also called combined heat and this term. This kind of stage in the Otto cycle is an adiabatic expansion. The Poynting vector and the intensity are the average of this quantity per unit area. The reciprocal of the focal length for a lens is called this, and the resolving type of this term is related to the numerical aperture. The (*) Stefan-Boltzmann equation relates this quantity for a blackbody to temperature to-the-fourth. Transmission lines lose this quantity because of their resistance, and it is distributed in namesake "grids". This quantity is work divided by time. For 10 points, name this quantity measured in Watts.**

ANSWER: power; prompt on "P"

19) *Note to moderator and players: Type of piece and composer required.*

The second movement of one of these works by this composer is an intro for the concluding Rondo that includes a theme of a series of broken chords in triplets. Another one of these works is organized around a descending third and is named for the instrument it is written for. One is dedicated to Karl Lichnowsky and opens with a Grave section. A famous of these compositions is (*) *quasi una fantasia* and got its nickname from its evocation of Lake Lucerne at night. For 10 points, name these 32 pieces for a solo keyboard instrument including the "Pathetique" and "Moonlight", written by the composer of the "Pastoral" and "Choral" symphonies.

ANSWER: Piano Sonatas by Ludwig von Beethoven; prompt on partial answers

20) **The Huston Plan would detain members of one of these movements, who attended "teach-ins" at the University of Michigan. The Longshoreman's Association patrolled New York City during riots incited by one of these movements, which the Butternut Democrats supported. In one year, Baltimore riots targeted the Federal Republican (*) newspaper because it held this stance. George McClellan and the Copperheads had this type of agenda in 1864. The America First Committee and Doves in 1812 shared this view. For 10 points, name these movements opposing conflict.**

ANSWER: anti-war movements; accept word forms and synonyms

Bonuses

1) The “Edible City”, also called Andernach, and Malmö use this practice, and vertical farming is one type of it. For 10 points each:

[10] Name this usually water-intensive practice of efficiently growing foods or fuels in cities. Victory gardens and rooftop farms are examples of this practice.

ANSWER: **urban agriculture** or **gardening**; accept word forms and synonyms

[10] This densely populated city has prohibitively high rents, which restrict urban farming to small spaces in districts like Bayview, Outer Mission, and Sunset.

ANSWER: **San Francisco**

[10] This city’s been more successful, but suffers the opposite problems that San Francisco has. Its Elmwood Park and New Center areas have some successful farms.

ANSWER: **Detroit**

2) The Al-Adab, or Book of Manners (or Discipline) is one section of this work. For 10 points each:

[10] Name this text, which includes a section on the direct interpretations of Muhammed’s learning from Allah, and is second only to the Quran.

ANSWER: **Hadith**

[10] One of the Hadith’s sections calls cursing these people “a great sin”, and Allah will not show mercy to sinners who have been disowned by these people. Similarly, “the greatest obligatory act” is being good to these people.

ANSWER: **parents**

[10] In the Hadith, this principle is expressed, which is shared with Christianity’s Genesis 1:27. In Islam, it says that Allah made man the most beautiful or perfect of creatures.

ANSWER: **God made man like himself**; accept all synonyms and word forms, and be lenient

3) ***NOTE TO MODERATOR: DO NOT REVEAL ALTERNATE ANSWERS TO PART ONE.***

This piece was composed before its composer invented the twelve-tone system. For 10 points each:

[10] Name this piece that portrays a pregnant woman and her lover under the moonlight. It was inspired by a poem authored by Richard Dehmel.

ANSWER: **Transfigured Night** or **Verklärte Nacht**; or Arnold **Schoenberg’s Op. 4**

[10] *Transfigured Night* was composed by this Austrian serialist composer, who set a cycle of translated Albert Giraud poems to music in his *Pierrot Lunaire*.

ANSWER: Arnold **Schoenberg**

[10] *Transfigured Night* was composed for an ensemble of this many instruments. This is the usual number of strings on a guitar.

ANSWER: **six** <SC>

4) The protagonist of this work is taken to the title location by a hoopoe bird named “Butt.” For 10 points each:

[10] Name this book in which the title character, along with Walrus, Prince Bolo and General Kitab, defeats Khattam-Shud and is rewarded with the expulsion of Snooty Buttoo back in the human world.

ANSWER: **Haroun and the Sea of Stories**

[10] *Haroun and the Sea of Stories* is a children’s book by this Indian-born British author. A fatwa was issued against this author after the publication of his novel *The Satanic Verses*.

ANSWER: Salman **Rushdie**

[10] In this novel by Rushdie, the telepathic Saleem Sinai is one of the title group who were born at the exact moment of India’s independence.

ANSWER: **Midnight’s Children** <JG>

5) One “indicative planning” policy was implemented by this man’s Commission Général du Plan, and that policy eventually inspired ten 5-year plans. For 10 points each:

[10] Name this French founder of the European Union, the namesake of a post-WWII plan that gave France control over the Ruhr and the Saar.

ANSWER: Jean **Monnet**

[10] This treaty founded the European Economic Community in 1957, and was amended by the 1997 Maastricht Treaty. It created a limited European common market until the Single European Act paved the way for the EU.

ANSWER: Treaty of **Rome**

[10] Economic expansion after WWII has been called this type of age of capitalism. This metal also named a standard that was based on bullion in Britain and comes in bars.

ANSWER: **gold**/en

6) For 10 points each, name some things about Rousseau’s political theory:

[10] Rousseau’s *Social Contract* rejected the divine right of members of this institution, which could effectively contain the evil of luxury in states with low surplus produce.

ANSWER: **monarchy**

[10] In *The Social Contract*, Rousseau proposes that all laws be derived from this source. This construct is different from the “will of all” because it focuses on the good of the state, not particular individuals.

ANSWER: **general will** or **volonté générale**

[10] Rousseau dedicated his *Discourse on Inequality* to a polity of this kind, because he felt that it provided the best balance between natural equality and inequality brought on by humanity.

ANSWER: **city-states**; prompt on “**small states**” and word forms of “**small**” and “**state**” <SC>

7) These states are actually higher-order stationary states with less-negative energies in the Bohr [bore] model. For 10 points each:

[10] Name these states for electrons that have been “energized” above the ground state.

ANSWER: **excited states**

[10] Electrons obey this principle, which states that the product of errors in the position and momentum, or energy and time, of a particle will exceed Planck's reduced constant over two.

ANSWER: **Heisenberg uncertainty** principle; prompt on "**uncertainty**" or "**indeterminacy principle**"

[10] This type of excited state can be created by optical pumping and contains more electrons than the "lower" state. Laser photons are emitted when those electrons transition from this state to a lower one.

ANSWER: **metastable** state

8) The best known translation of this work was done by Edward FitzGerald. For 10 points each:

[10] Name this collection of quatrains by Omar Khayyam. One work in this collection famously begins "The Moving Finger writes: and, having writ, moves on."

ANSWER: *The* **Rubaiyat**

[10] The Rubaiyat was written in this language spoken in Iran, which was also used by poets such as Nizami, Saadi and Rumi.

ANSWER: **Persian** or **Farsi**; accept **Parsi**

[10] The national epic of Iran is this epic poem by Ferdowsi whose title translates as "The Book of Kings." Stories in this poem include the tales of Sohrab and Rostam and Bijan and Manijeh.

ANSWER: **Shahnameh** <JG>

9) This organ contains pit cells present in its sinusoidal epithelium and Kupffer cells. For 10 points each:

[10] Name this two-lobed organ that secretes bile, filters blood, and is located to the right of the stomach.

ANSWER: **liver**

[10] The liver can detoxify this 2-carbon alcohol to Acetyl-CoA by oxidizing it with dehydrogenases, catalases, and a cytochrome P450 enzyme variant.

ANSWER: **ethanol**; accept **acetyl alcohol** or **ethyl alcohol**

[10] These hardy, numerous liver cells contain aldehyde dehydrogenases and high levels of VLDL and glycogen. They also contain many ribosomes for protein synthesis.

ANSWER: **hepatocytes**

10) This man's wife Lurleen replaced him as governor since his state's constitution barred him from seeking reelection. For 10 points each:

[10] Name this Governor who once stood in front of a door at his state's flagship university to prevent black students from enrolling. He ran for President on the American Independent Party ticket in 1968.

ANSWER: George Corley **Wallace**, Jr.

[10] While running for President as a Democratic candidate in 1972, Wallace was shot at the Laurel Shopping Center in this state, which had once been governed by Vice President Spiro Agnew.

ANSWER: **Maryland**

[10] Spiro Agnew was the second Vice President to resign. The first was this man, who authored the *South Carolina Exposition and Protest* during the nullification crisis as Andrew Jackson's Vice President.

ANSWER: John Caldwell **Calhoun** <CC>

11) This man won a Golden Globe in 2014 for his role in Brooklyn Nine-Nine. For 10 points each:

[10] Name this former Saturday Night Live cast member who is currently a member of the comedy trio The Lonely Island.

ANSWER: Andy or Andrew **Samberg**

[10] In this song, the The Lonely Island members discover that Michael Bolton is a major cinephile after he reveals his obsession with the main protagonist of the Pirates of the Caribbean series.

ANSWER: **Jack Sparrow**

[10] In the music video for this The Lonely Island song, Samberg does the title action to objects ranging from energy drinks to a kid's birthday cake until he is tased by "phonies". The moral of this song is to never trust the system.

ANSWER: **Threw It On the Ground** <DS>

12) Members of the 'household treasury office' helped advise rulers during this era, in which the Fujiwara were 'civil dictators', or *kanpaku*. For 10 points each:

[10] Name this era from 794-1185 in which the capital was moved to a namesake city, now Kyoto. The Tale of Genji and Pillow Book were written in this era, which followed the Genpei War.

ANSWER: **Heian** period or era; **do not accept Heian-kyo**

[10] This religion syncretically merged with Shinto during the Heian period, with sects like Tendai and Shingon gaining some political power.

ANSWER: **Buddhism**, prompt on "**Theravada**" or "**Mahayana**"

[10] The Heian period saw the rise of this private land ownership system for aristocrats, who defended land with warriors who later became *samurai*, and landowning farmers, who would send rice to the capital to stay tax-free.

ANSWER: **shoen** system

13) To convert between $K_{sub c}$ and $K_{sub p}$, you may note that this measurement is equal to pressure over temperature times the ideal gas constant. For 10 points each:

[10] Name this measurement of concentration in units of moles per liter.

ANSWER: **molarity**, **do not accept wrong things like molality or normality**

[10] Solutions will have lower values for this quantity depending on their solute molarity. It's not mole fraction, but it can be measured via Raoult's law for solutions or with the Clausius-Clapeyron equation for a pure substance.

ANSWER: **vapor pressure**

[10] This technique can be used to 'logarithmically' decrease molarity. It involves diluting a solution, then diluting a fraction of that solution, and then repeating as necessary.

ANSWER: **serial** dilution <HW>

14) Various jazz musicians have titled their works *Moanin'*. For 10 points each:

[10] This leader of the Jazz Messengers included the New-Orleans' marching band-inspired "Blues March" on his album *Moanin'*.

ANSWER: Art **Blakey** (or Arthur **Blakey**)

[10] Blakey played this instrument, which includes a hi-hat and multiple cymbals. It is primarily used to keep a steady rhythm for the band.

ANSWER: **drums**

[10] Charles Mingus, a player of this instrument, included the song *Moanin'* on his album *Blues & Roots*. In jazz, this instrument is typically played *pizzicato* to "walk" a namesake line.

ANSWER: double **bass** <DS>

15) In a novel by this man, the impotent veteran Jake Barnes fights Robert Cohn after Robert has an affair with Lady Brett Ashley. For 10 points each:

[10] Name this author of *The Sun Also Rises*. The fisherman Santiago pursues a large marlin that is eventually eaten by mako sharks in his novella *The Old Man and the Sea*.

ANSWER: Ernest Miller **Hemingway**

[10] This recurring Hemingway character first appears in the story “Indian Camp,” in which his father performs an emergency C-section. He goes fishing after visiting the burnt-out town of Seney in “Big Two-Hearted River.”

ANSWER: **Nick Adams**

[10] In this Nick Adams story, Nick warns the Swedish boxer Ole Andreson that he is the intended target of hit men Max and Al.

ANSWER: “The **Killers**” <CC>

16) One of this organization’s posters shows a cardiogram leading into its name. For 10 points each:

[10] Name this organization of union workers, led by Lech Walesa, that started a “self-limiting revolution”. They protested at the Lenin Shipyard and various other places.

ANSWER: **Solidarity**

[10] When Solidarity leader Lech Walesa became the Polish president, this “wall” between Soviet and free Europe was broken. Winston Churchill called it a structure from Stettin on the Baltic to Trieste on the Adriatic.

ANSWER: **Iron Curtain**

[10] This largely successful Soviet cultural policy of the 1980s named a 1965 meeting and was called “honest and total” by Alexander Solzhenitsyn.

ANSWER: **glasnost**

17) The rivers of the Greek underworld hold immense power- just ask this man, whose concubine Briseis was taken by Agamemnon. For 10 points each:

[10] Name this hero, who was given near-invulnerability after being dipped into the river Styx by his mother Thetis save for an uncovered heel.

ANSWER: **Achilles**

[10] The Phlegethon flowed into this area of the underworld, and tortured the souls within it. This pit of the underworld, which was not Erebus, was also the primordial deity born after Chaos.

ANSWER: **Tartarus**; do not accept **Hades** or **Dis** or **Orcus**

[10] The shades of the dead destined for reincarnation were required to bathe in this river. This river was also known as the river of unmindfulness.

ANSWER: River **Lethe** <KD>

18) *The Lindisfarne Gospel* is a notable example of these objects. For 10 points each:

[10] Name these artistic objects created mainly during the Middle Ages in Europe. The construction of these objects consisted of illustrating and giving intricate borders or other designs, often with gold or silver leaf, to hand-copied texts, typically done in the West by monks.

ANSWER: **illuminated manuscripts**; prompt on “**manuscripts**”

[10] One of the most beautiful examples of an illuminated manuscript is this collection of the Gospels created around 800 AD and named for the abbey outside Dublin where it was housed for centuries.

ANSWER: *Book of* **Kells**

[10] Some of the most beautiful and important illuminated manuscripts in the Islamic world came out of this country, whose national epics such as the *Shahnameh* provided many stories ripe for miniature painting.

ANSWER: Persia or Iran <JG>

19) This present-day nation is the setting of a play in which six Argive warriors join Polynices in fighting against his brother Eteocles. For 10 points each:

[10] Name this modern country where, in ancient times, plays like *Seven Against Thebes* were performed at the Dionysian festival.

ANSWER: (Hellenic Republic of) Greece

[10] This character becomes a foreman at a lignite mine on Crete and seduces the hotel owner Madame Hortense in a novel by Nikos Kazantzakis.

ANSWER: Alexis Zorba; accept either or both underlined names; accept Zorba the Greek

[10] One of the famous poets in the Modern Greek language is this man, who asked "Why isn't anything happening in the senate? / Why do the senators sit there without legislating?" in his poem "Waiting for the Barbarians".

ANSWER: Constantine P. Cavafy or Konstantinos Petrou Kavafis, accept Kavaphes <CC/JG>

20) The continuum hypothesis states that there is not a cardinality between this number and two to this number. For 10 points each:

[10] Name this number equal to the cardinality of any countably infinite set.

ANSWER: aleph null; accept zero or naught in place of "null"

[10] A countably infinite set is defined as one such that a bijection from this set is possible. This set is defined by Peano's axioms.

ANSWER: natural numbers

[10] The natural numbers debatably begin with either the number 1 or this number, which is the additive identity, because a number minus itself is this number.

ANSWER: zero <HW>