1. **This unit is multiplied by meters per kilogram squared in the universal gravitational constant, and by meters per Coulomb squared in the Coulomb constant. Electric field strength is measured in this unit per Coulomb. Impulse is expressed by this unit times a second, and torque by it times a (*)** meter. This unit can be expressed as a product of mass and acceleration, making it equivalent to one kilogram times one meter per second squared. For 10 points, name this unit used to measure force.
ANSWER: **Newton**s [or **kilogram per meter per second squared** until it read; prompt on **force**]

187-14-101-01101

BONUS: What stuff makes up nearly 80% of the universe's mass but is very difficult to observe?
ANSWER: **dark matter**

233-14-101-0110-11

2. **This man's first recorded solo was on the Dizzy Gillespie song "We Love to Boogie." McCoy Tyner, Jimmy Garrison, and Elvin Jones were the members of this man's namesake quartet. This man composed the song "Naima," named for his wife, as well as a variation of the Rodgers and Hammerstein song (*)** "My Favorite Things." His musical style was known as "sheets of sound." For 10 points, name this jazz saxophonist who composed *Giant Steps* and *A Love Supreme.*
ANSWER: John **Coltrane**

030-14-101-01102

BONUS: What branch of chemistry deals with the relative amounts of reactants and products in chemical reactions?
ANSWER: **stoichiometry**

153-14-101-0110-11

3. **The Melian Dialogue takes place between representatives of Melos and this city hoping to conquer Melos. It was connected by the long walls to the port of Piraeus. Tribute given to this city allowed it to build up a powerful navy. It was the most powerful member of the (*)** Delian League, which fought against a league of city-states allied with Sparta in the Peloponnesian War. For 10 points, name this city whose Acropolis contains the Parthenon.
ANSWER: **Athens**

121-14-101-01103

BONUS: What 1954 Supreme Court decision declared that segregated schools were "inherently unequal?"
ANSWER: *Brown* v. *Board of Education of Topeka, et al.*

052-14-101-0110-11

4. **According to Maxwell's equations, this number times the time derivative of the magnetic field is equal to the curl of the electric field. Reversing the operands of the vector cross product is equivalent to multiplying the components of the resultant vector by this number. Reversing a chemical reaction multiplies the value for (*)** enthalpy by this number. e to the power of i pi gives this number, whose square root is taken for the definition of the imaginary unit. It is the exponent of x for one over x. For 10 points, identify this integer that changes the sign of a number multiplied by it.
ANSWER: **negative one** [or **minus one**]

234-14-101-01104

BONUS: Fort Moultrie and Fort Sumter were located outside of what major city, where the first shots of the Civil War were fired?
ANSWER: **Charleston**, South Carolina

5. **The speaker of this poem mentions pausing before an edifice whose "roof was scarcely visible, the cornice but a mound," noting that the house seemed but "a swelling of the ground." That speaker also "passed the school, where children strove at recess, in the ring" while (*)** driving slowly, for the driver "knew no haste." The speaker gets in a carriage that "held but just ourselves and Immortality." For 10 points, identify this Emily Dickinson poem that begins when Death "kindly stopped for me."
ANSWER: "**Because I could not stop for Death**"

BONUS: What American sculptor is famous for creating mobiles such as *Lobster Trap and Fish Tail*?
ANSWER: Alexander **Calder**

6. **"Skinners" used a sledgehammer to drive a spike through the nose of these animals. It appeared in the nickname of the U.S. 10th Cavalry Regiment consisting of African-American soldiers. A now defunct type of nickel showed this American (*)** animal. These animals were killed in mass quantities by being driven over a cliff by tribes such as the Blackfeet. For 10 points, name this bovine animal, very important to Plains Indians tribes, which lent Wild West showman Bill Cody his nickname.
ANSWER: American **buffalo** [or **bison**]

BONUS: What American soccer player scored three headers against Brazil, France, and Japan respectively during the 2011 FIFA Women's World Cup?
ANSWER: Abby **Wambach** [or Mary Abigail **Wambach**]

7. **It takes at most seven colors to fill in a map drawn on this surface. This shape, which consists of all points a given distance from a given circle, can be mapped to a rectangle whose left and right edges and top and bottom edges are adjacent. It can be obtained by rotating a (*)** circle around a non-intersecting axis. This shape has genus 1 because of the hole in the middle, which is why people joke topologists can't tell it apart from a coffee cup. For 10 points, identify this geometrical figure shaped like a donut.
ANSWER: **torus**

BONUS: What mountain in Argentina is the highest peak in the Andes?
ANSWER: **Aconcagua**

8. **This man wrote such plays as *The Mandrake,* though he is more noted for nonfiction such as a book that argued Romulus should not be blamed for killing Remus because the ends justified the means. This author of the *Discourses on Livy* expressed the hope that (*)** Italy would be freed from "barbarians," and warned against unrealistic generosity and virtue, in a handbook for rulers. For 10 points, name this author who wrote that "it is safer to be feared than loved" in *The Prince*.
ANSWER: Niccolo **Machiavelli**

BONUS: What Greek letter is used to represent the summation of a series?
ANSWER: upper-case **sigma**

![hsapq logo]

SET A:

1. BONUS: This is a 30-second calculation question. If the probability that it rains on any given day is 30% and each day's weather is independent from all other days' weather, what is the probability that it rains Saturday, rains Sunday, but does not rain on Monday?
ANSWER: **6.3**% [or **63/1000**; or **6.3/100**]

190-14-101-0110-12

2. BONUS: What fourteenth century Emperor of Mali made a pilgrimage to Mecca featuring 80 camels with 300 pounds of gold and 12,000 slaves?
ANSWER: Mansa **Musa** [or Kankan **Musa**]

030-14-101-0110-12

3. BONUS: What is the name of the "Godfather of Soul" who is the world's most sampled musician and whose hits include "Cold Sweat" and "Night Train"?
ANSWER: James **Brown**

030-14-101-0110-12

4. BONUS: What poet of the Harlem Renaissance who wrote about "a dream deferred" and penned "The Negro Speaks of Rivers?"
ANSWER: Langston **Hughes**

190-14-101-0110-12

SET B:

1. BONUS: What American poet of "i sing of olaf glad and big" used unusual punctuation and lowercase letters?
ANSWER: E. E. **Cummings**

227-14-101-0110-12

2. BONUS: This is a 20-second calculation question. What are the coordinates of the vertex of the parabola "y = x squared minus 10 x plus 25"?
ANSWER: (**5,0**) [or **x = 5, y = 0**; prompt on partial answer]

190-14-101-0110-12

3. BONUS: What husband of Linda and father of Biff and Happy is the protagonist of Arthur Miller's *Death of a Salesman?*
ANSWER: **Willy** Loman [or Willy **Loman**]

052-14-101-0110-12

4. BONUS: This is a 30-second calculation question. If the cosine of x equals one minus the cosine of x, and x is a first-quadrant angle, then what is x?
ANSWER: **pi over three** radians [or **one-third pi** radians; or **60** degrees]

190-14-101-0110-12

9. **In one song, this rapper raps about how "Back in the day money was short" but that he's "making it taller." In another song, he raps about hitting "the pedal once" and making "the floor shake." This creator of the album** (*) *O.N.I.F.C.* collaborated with 50 Cent on "Telescope." For 10 points, name this rap artist who, in his album *Rolling Papers,* performs "When I'm Gone" and "Black and Yellow."
ANSWER: **Wiz Khalifa** [or Cameron Jibril **Thomaz**]

130-14-101-01109

BONUS: What "Little Giant" lost to Abraham Lincoln in the presidential election of 1860 and famously debated Lincoln in 1858?
ANSWER: Stephen Arnold **Douglas**

052-14-101-0110-11

10. **The LZW method for this procedure improved upon one which creates prefix codes based on the frequency of symbols being used. Huffman coding is one method of this process, while a more facile approach represents "runs" of** (*) data with a single character and number. When this procedure retains all the original data, it is called lossless. For 10 points, name this process which shrinks the number of bits required to encode information.
ANSWER: data **compression**

190-14-101-01110

BONUS: What Minnesota Congresswoman, who confused the birthplace of John Wayne Gacy with that of John Wayne during her 2012 Presidential run, announced that she will not seek re-election in 2014?
ANSWER: Michelle **Bachmann**

088-14-101-0110-11

11. **This author included the character Elwin Ransom in novels of his *Space Trilogy* like *That Hideous Strength* and *Out of the Silent Planet*. The Pateient's death in an air raid leads to the failed temptor-demon Wormwood's consumption in this man's *The* (*)** *Screwtape Letters*. This author's most famous series of novels features the Pevensie children and includes the lion Aslan as a stand-in for Jesus. For 10 points, identify this devout Christian author of *The Chronicles of Narnia.*
ANSWER: Clive Staples **Lewis**

233-14-101-01111

BONUS: What short story by Jorge Luis Borges describes a universe of hexagonal rooms filled with books which may or may not be meaningful?
ANSWER: "The **Library of Babel**" [or "La **biblioteca de Babel**"]

121-14-101-0110-11

12. **The top left of this painting contains a rectangular metal bar. The objects in this painting are broken up into small rectangular pieces in a followup "Disintegration" of this painting. A fly and (*)** ants can be seen in the leftmost of this painting, consuming a metal object. One of the four timepieces in this painting is draped over a tree in the left background. For 10 points, name this painting by Salvador Dali that shows three melting clocks in a dream world.
ANSWER: *The **Persistence of Memory*** [or *La **Persistencia de Memoria***]

135-14-101-01112

BONUS: Joseph Asagai makes a marriage proposal to Beneatha, and the central family moves into an all-white neighborhood, in what play about the Younger family, written by Lorraine Hansbury?
ANSWER: *A Raisin in the Sun*

13. **CNN correspondent Arwa Damon found the diary of one individual involved in this event. Jack Murphy and Brandon Webb compiled the "definitive report" on this event. Critics allege that Barack Obama took fourteen days to call this event a (*)** terrorist attack. Tyrone Woods, Glen Doherty, and Sean Smith died at this event, whose most famous casualty was ambassador Christopher Stevens. For 10 points, name this September 11, 2012 attack on a US facility in Libya.
ANSWER: attack on the US Consulate in **Benghazi** [prompt on attack on a US Consulate in **Libya** before it is mentioned; accept the killing of ambassador Christopher **Stevens** before it is mentioned]

BONUS: Name the city in which a murder was committed from the Schoolbook Depository at Dealey Plaza, by a man who was himself shot by Jack Ruby shortly thereafter.
ANSWER: **Dallas**

14. **The protagonist of this play says that a man is "not the type that goes for jasmine perfume." It begins with a former English teacher coming to live with relatives at the "Elysian Fields." At the end of this play, the protagonist is led off to a mental institution while saying she has always (*)** depended on the kindness of strangers. In one scene, the brutish antagonist screams the name of his wife, Stella. For 10 points, name this Tennessee Williams play about Stanley Kowalski and Blanche DuBois.
ANSWER: *A Streetcar Named Desire*

BONUS: What is the point on the Earth's surface directly above the focus of an earthquake?
ANSWER: **epicenter**

15. **This location is home to the Very Large Telescope. Animals that survive here include Darwin's leaf-eared mouse and some Humboldt Penguins. This desert has a region south of Antofagasta which resembles Martian soil. It was once home to the world's largest supply of sodium nitrate, but now features numerous abandoned (*)** "saltpeter" mining towns. This desert typically gets about fifteen millimeters of rain a year. For 10 points, name this South American desert, the driest in the world.
ANSWER: **Atacama** Desert [prompt on **Chile**]

BONUS: What artist included a controversial depiction of Lenin in his mural *Man at the Crossroads*?
ANSWER: Diego **Rivera**

16. **This man called for a "kindler, gentler" America after winning an election in which he called his opponent a "card-carrying" ACLU member. This broccoli-hating president launched Operation Just Cause, which ousted Panamanian president Manuel Noriega. Failure to address an ongoing recession led to his defeat on the slogan (*)** "It's the economy, stupid!", even though he had previously won the Gulf War. For 10 points, name this president who oversaw the end of the Cold War before losing re-election to Bill Clinton.
ANSWER: George **H.W. Bush** [or George **Herbert Walker Bush**; or George **Bush, Sr.**; or answers specifying "the **older Bush**;" do not accept or prompt on "George W. Bush" or "Dubya"]

BONUS: Neonicotinoid pesticides are the likely cause of the "colony collapse disorder" affecting what animals?
ANSWER: honey **bee**s

17. **One character in this novel writes stories for the *Weekly Volcano*, but stops after learning of Professor Bhaer's disapproval. As children, the protagonists of this novel liked to act out scenes from *The Pilgrim's Progress*. One character in this novel nearly lets her** (*) sister drown while ice skating. Beth dies of scarlet fever in this novel, and Laurie marries Amy after being rejected by Jo. For 10 points, name this novel about the March sisters written by Louisa May Alcott.
ANSWER: _**Little Women**_

BONUS: What avatar of Vishnu killed Ravana in order to save his wife Sita?
ANSWER: Lord **Rama**