Round 11: Tossups

1. **This man proved that a regular polygon may be constructed if its number of sides is a Fermat prime. This man struggled to find a proof of quadratic reciprocity, but eventually provided six different proofs. While searching for Ceres, he discovered the method of least squares. This man claimed to discover** (*) non-Euclidean geometries before János Boylai, but like many of his other ideas, he never published this result. Two of Maxwell's equations are named for this man, including a law regarding flux, and he also names a normal distribution. For ten points, name this German mathematician who supposedly found the sum of the first hundred integers in seconds.
ANSWER: Carl Friedrich **Gauss**

2. **The Akkerman Convention gave freedom of movement to Serbs during this conflict, which saw George Canning negotiate a Treaty of London. The islands of Spetses and Hydra had successful navies during this conflict, while the people of Psara were massacred. The Battle of (*)** Navarino during this war saw the destruction of one side's navy by French, Russian, and British forces. The Filiki Eteria initiated this conflict, and was later led by Alexandros Ypsilantis. For ten points, name this early 19th century conflict in which a Hellenic state was liberated from the Ottoman Empire.
ANSWER: **Greek** War of **Independence** (accept equivalents)

3. **Two of this composer's operas are based on works by Alexander Pushkin: *The Queen of Spades* and *Eugene Onegin*. This composer's Op. 66 was adapted into "Once Upon a Dream" for a Disney movie of the same name. In this composer's ballets,** (*) King Siegfried must rescue his love from von Rothbart's curse which had turned her into the title bird and Clara travels to the Land of Sweets where she meets The Sugar Plum Faerie. For ten points, name this composer of the ballets *Sleeping Beauty*, *Swan Lake* and *The Nutcracker*.
Answer: Peter Ilyich **Tchaikovsky** (accept Pyotr Ilyich **Tchaikovsky**)

4. **This group proclaims that "Rene Descartes was a drunken fart / 'I drink therefore I am'" in their "Philosopher's Song." In their "Galaxy Song" the singer lists the various speeds at which the Earth, Sun and Milky Way are all moving. A barber reveals that he "go[es] to the lavat'ry" and "like[s] to press wildflowers" in "The (*)** Lumberjack Song." "Why are we here / what's it all about / is life really real / or is there some doubt" is asked in the introductory song to their film *Meaning of Life*. For ten points, what British comedy troupe recorded "Always Look on the Bright Side of Life" for their film *Life of Brian* and "Camelot Song" for their movie about the Holy Grail?
ANSWER: **Monty Python**, also accept a list of group members (Graham **Chapman**, John **Cleese**, Terry **Gilliam**, Eric **Idle**, Terry **Jones**, Michael **Palin**) in any order

5. **Upon viewing this city for the first time, one person likened it to the Spanish romance *Amadis of Gaul*. A pyramid with two sets of stairs, one painted blue and white and the other painted red, to symbolize the wet season and wartime, respectively, is part of this city's Temple Mayor. This city situated near (*)** Lake Texcoco was located on a swamp, which hindered the escape of the conquistadores. La Malinche aided Hernán Cortés in capturing this city, where he held Moctezuma hostage. For ten points, name this city that served as the capital of the Aztec civilization, now known as Mexico City.
ANSWER: **Tenochtitlan**, prompt on "Mexico City" before mention

6. **This term was used to describe a colonial Argentinian government, as well as an official group instituted by the adoption of the Lex Titia. Two members of a different group with this name had previously shared a consulship in 70 B.C.E. That group ended when one member was killed by (*)** Parthians at the Battle of Carrhae. One member of that original alliance described by this term defeated Vercingetorix and wrote about his conquest of Gaul. For ten points, name this term for a Roman political alliance consisting of either Lepidus, Marc Antony and Octavian or Crassus, Pompey and Julius Caesar, literally meaning "three men".
ANSWER: **triumvirate** (accept First **Triumvirate** or Second **Triumvirate**)

7. **In this novel, the spirit of a man murdered in a duel, Prudencio Aguilar, closes his slit throat with plugs of grass and another character sits on a lit stove after pirates attack her hometown. Mr. Herbert and Mr. Brown bring a banana plantation to the central city of this novel and the** (*) third character of one name is the only survivor of a massive strike. José Arcadio and Ursula Iguaran leave Riohacha in this novel to found a city "of mirrors" eventually destroyed by a windstorm. That central city is called Macondo. For ten points, name this novel about the Buendia family by Colombian author Gabriel García Márquez.
ANSWER: *One Hundred Years of Solitude* or *Cien años de soledad*

8. **The equation to calculate this quantity can be derived from Legendre transforms of the internal energy, while the Duhem relation can be used to determine it in homogeneous systems. It can also be computed more intuitively as the sum of all particles of chemical potential times particle number. It is different from its** (*) Helmholtz variety, and surface tension is this quantity per unit area. Its change is equal to enthalpy minus the product of temperature and entropy. It is negative for spontaneous reactions. For ten points, this quantity that is a numerical representation of the amount of energy available to do work in a reaction, symbolized delta G.
ANSWER: **Gibbs free energy** (prompt on "free energy")

9. **This artist created a work showing a wagon train in Cody, Wyoming in the style of his teacher, Thomas Hart Benton, entitled *Going West*. He married fellow artist Lee Krasner, and Robert Hughes claimed that forgers could not imitate his more well-known style of painting without making** (*) "spaghetti". That style of "action painting" was used in paintings by this New York School painter, such as his No. 1 and No. 5. That late styl earned him the nickname of "Jack the Dripper". For ten points, name this American muralist who created large-scale splatter paintings like *Lavender Mist*.
ANSWER: Jackson **Pollock**

10 **This character's "Roomies" remove the belongings of the "dead man" Mudd from his tent, and he takes immense pride in the officer's hall to which he contributed nothing. At the end of the novel with which he appears, he barely escapes Nately's whore after accepting a deal with Colonels** (*) Cathcart and Korn to be hailed as a hero and go home. Major Major is inspired by this Pianosa-based captain's habit of creatively censoring letters and signing them "Washington Irving". He frequently commiserates with Doc Daneeka, and eats at Milo Minderbinder's mess hall. For ten points, name this officer and protagonist from Joseph Heller's novel *Catch-22*.
ANSWER: John **Yossarian**, prompt on "Yo-Yo"

11. **Hinatea and Hinauri are two forms of one of these entities in Polynesian myth. One of these figures in Inuit mythology was Igaluk, who created the stars by joining with his sister Malina. It's not witchcraft, but Hecate ["heh-kah-TEE"] was revered as a goddess in this capacity, as was her grandmother, the mother of Asteria. Thoth originally had this role, which explained his part in creating the** (*) 365-day calendar. In Chinese mythology, the Mid-Autumn Festival was created in honor of Chang'e, who, with a large rabbit, rose to the skies to become one of these. For ten points, what kind of deities are exemplified by Artemis and Luna?
ANSWER: **moon** gods/goddesses/deities or deities of the **moon**

12. **The Alborz Mountains lie north of the Dasht-e Kavir salt desert in this country. The ancient civilization of Elam was located in what is now this nation, which faced a separatist movement in Khuzestan Province. The Zagros Mountains run down the west side of this country, from its border with** (*) Azerbaijan to the Strait of Hormuz. The region of Balochistan is shared between this country and its neighbors to the southeast, Afghanistan and Pakistan. North of the Gulf of Oman is – for ten points – what nation that is home to the Persian Plateau?
ANSWER: Islamic Republic of **Iran**

13. **This term names a series of maps of the Earth, though only two are public domain. In mathematics, this type of field is a function from a subset of *n*-space to *n*-space itself. The NIAID sponsors a bioinformatics database of invertebrate ones, and zoonotic** (*) diseases borne by biological types of these include Lyme disease and malaria. In that biological context, this term refers to organisms that transmit those diseases. In physics, a Euclidean one might be used to represent force or velocity. For ten points, name this term for a mathematical entity with direction and magnitude.
ANSWER: **vector**s, or **Vector** (Smart) Maps or **VMAP**s

14. **Edward Steichen photographed the creator of this work facing it in a similar pose. This work was originally intended for the tympanum of another of this artist's larger works commissioned by Edmond Turquet. In that context, the subject of this work may be intended to be** (*) Dante Alleghieri, contemplating the events of his *Inferno* as depicted behind him in the *Gates of Hell*, though it is more well known when cast as a freestanding sculpture. For ten points, name this nude bronze male figure who sits on a rock with his chin on his hand, evidently performing the title action, a sculpture by Auguste Rodin.
ANSWER: *The **Thinker*** or *Le **Penseur***

15. **In one novel by this author, after being split in half by a cannonball, Medardo becomes two people, the "good" and the "bad". In another one of his novels, two historical figures discuss the title entities without speaking the same language. This author of *The Cloven Viscount* also created the collection *t zero* in which** (*) Qfwfq ["kuh-FOOFK"] narrates a series of stories; Qfwfq reappears in one of another collection by this author, *Cosmicomics*. Marco Polo and Kublai Khan appear in one of his novels, and another is unique in that it includes alternating chapters written in the second person. For ten points, name this Italian author of *Invisible Cities* and *If on a winter's night a traveler*.
ANSWER: Italo **Calvino**

16. **William Calley, Jr. was convicted for murders that occurred in the Quang Ngai ["kang guy"] province in this year. One Vice Presidential candidate in this year, Curtis Lemay, suggested that one nation be "bombed to the stone age". This year's presidential race saw the abrasive run of Lemay's partner on the** (*) American Independent ticket, George Wallace. The Democratic candidate in this year, incumbent Vice President Hubert Humphrey, ultimately lost to the Republican, Richard M. Nixon. For ten points, name this year in which the My Lai ["me lie"] massacre was committed and Lyndon B. Johnson declined to run for reelection.
ANSWER: **1968**, prompt on "'68"

17. **Milton Friedman described this phenomenon as "taxation without legislation." John Hicks' IS/LM model disregards this phenomenon. The Employment Cost Index measures this phenomenon of wages in the labor market, while the** (*) Consumer Price Index measures it for everyday items. In the 1920's, the Weimar Republic experienced the 'hyper-' form of this phenomenon, while nowadays governments strive to keep its rate under 2% annually. For ten points, name this economic term for the rate at which goods and services become more expensive with time.
ANSWER: **inflation**

18. **This disease was discovered by Alfred Velpeau, but Rudolf Virchow was the one to give it its name. In one neoplasm of this disease, called the hairy cell type, the spleen enlarges in size, resulting in pinprick bleeding. The virus HLTV-1 is implicated in this disease, which can originate due to the** (*) BCR-ABL ["b-c-r-able"] 9-22 translocation. Risk factors for this disease include benzene exposure, although Down's Syndrome also increases likelihood of contracting it. For ten points, name this cancer that generates nonfunctional white blood cells and most commonly affects patients in its acute myelogenous form.
ANSWER: **leukemia**

19. **The opening chapter of this novel describes "matted" grass alongside a road that runs to Carisbrooke. This novel was adapted into the musical *Lost in the Stars* by Maxwell Anderson and Kurt Weill. After receiving a letter from Theophilius Msimangu, the protagonist of this novel travels in search of his sister Gertrude from his home village to** (*) Sophiatown, Johannesburg. James helps rebuild Ixopo despite the fact that his son, Arthur Jarvis, was killed by the protagonist's son Absalom. For ten points, name this novel about the priest Stephen Kumalo, set during Apartheid, by South African author Alan Paton .
ANSWER: ***Cry, The Beloved Country***

20. **Herman Hesse described this work as "enabl[ing] philosophy to blossom into religion," and Ralph Waldo Emerson "owed a magnificent day to" this text. Chapters of this work have titles such as Confidential Knowledge of the Ultimate Truth and The Three Qualities of Material Nature. In this work, a** (*) prince's servant convinces his master to go into battle, as he was born into the warrior class; this argument takes many themes from the older Upanishads. It is structured as a conversation between Arjuna and Krishna, an avatar of Vishnu serving as a charioteer. For ten points, name this section of the *Mahabharata*, a Hindu epic poem.
ANSWER: ***Bhagavad Gita*** (prompt on "*Mahabharata*")

Tiebreaker Question:

This author of "Fart Proudly" helped chart the Gulf Stream for the first time. He published in his brother's newspaper, the New-England Courant, under the pseudonym Mrs. Silence Dogood, and this onetime (*) postmaster general once noted that "three may keep a secret, if two of them are dead" in an annual publication wrote under the pen name Richard Saunders. That *Almanack* was written by, for ten points, what Philadelphian Founding Father who apocryphally flew a kite during a thunderstorm?

ANSWER: Benjamin **Franklin**

Round 11: Bonuses

1. The short-period variety of these originate in the Kuiper ["KY-per"] belt, while the long-period variety probably come from the Oort Cloud. For ten points each:
[10] Name these small icy objects that orbit around the sun, examples of which include Hale-Bopp and Halley's.
ANSWER: **comet**s
[10] This solid part a comet is composed of dust, rocks, frozen gases, and ice. Particles released from it due to solar wind and radiation forces form a coma and a tail.
ANSWER: **nucleus** (prompt on "core")
[10] Fragments of the nucleus of this comet collided with Jupiter in 1994, leaving scars visible for months.
ANSWER: **Shoemaker-Levy 9** (prompt on partial answer)

2. This artist painted a mermaid on the side of a sailboat which now stands in the Storm King Art Center in his native New York. For ten points each:
[10] Name this pop artist of *Drowning Girl* and a version of Van Gogh's *Bedroom in Arles* titled *Bedroom at Arles*.
ANSWER: Roy **Lichtenstein**
[10] Lichtenstein created this 1963 painting titled for the onomatopoeia shown within based on an image from "All American Men of War". It shows a plane, a pilot and subsequently, an explosion.
ANSWER: *Whaam!*
[10] "All American Men of War" was this form of media published by companies like DC. Lichtenstein took heavy influence from this medium with his use of ben-day dots.
ANSWER: **comic books** or **comics**

3. Jason Segel played this writer in the 2015 movie *The End of the Tour*. For ten points each:
[10] Name this author whose unfinished novel, *The Pale King*, was published posthumously in 2011. He also wrote numerous essays, including "Consider the Lobster" and "A Supposedly Fun Thing I'll Never Do Again".
ANSWER: David Foster **Wallace**
[10] Wallace's most famous novel is this immense one with numerous footnotes that details the Incandenza family's experiences with the title film cartridge.
ANSWER: *Infinite Jest*
[10] In the essay "A Supposedly Fun Thing I'll Never Do Again", Wallace describes his time vacationing on one of these called the *Nadir*. It was originally called *Zenith*, but he rechristens it early in the essay due to his bad experiences there.
ANSWER: **cruise ship**, prompt on "boat" or "ship"

4. This man taught at the medical school at Cos. For ten points each:
[10] This Greek is often considered the father of Western medicine as he authored a namesake oath beginning "First, do no harm", which is taken by doctors to this day.
ANSWER: **Hippocrates**
[10] This man is considered the father of modern anatomy for his 1543 book *De humani corporis fabrica*. It included numerous woodcuts based on the dissections he performed on stolen bodies.
ANSWER: Andreas **Vesalius** or Andries **van Wesel**
[10] This English author published his influential textbook on anatomy, illustrated by Henry Vandyke Carter, in 1858.
ANSWER: Henry **Gray** (accept *Gray's* Anatomy)

5. This virus can be spread through intercourse or through exchange of blood. For ten points each:
[10] AIDS is caused by this virus. It is a retrovirus, which means that it actually has an RNA genome.
ANSWER: **human immunodeficiency virus** or **HIV**
[10] HIV infects these cells of the immune system in AIDS. They are so named because they develop in the thymus, and they are critical in innate immunity.
ANSWER: **T cells**
[10] This protein on some T cells is the entry point for the virus into T cells. Its normal function involves helping T cells recognize antigen-presenting cells in the MHC II ["MHC two"].
ANSWER: **CD4**

6. In 2008, he broke a speed record held by his countryman Asafa Powell. For ten points each:
[10] This Jamaican athlete holds the world record for 100 metres at 9.58 seconds and 200 metres at 19.19 seconds, both of which were set at the 2009 Berlin World Championships.
ANSWER: Usain **Bolt**
[10] The first pilot to break the sound barrier was this Air Force brigadier general who achieved the milestone in the Bell X-1 in 1947.
ANSWER: (Charles) Chuck **Yeager**
[10] In 1969, this man re-entered Earth's atmosphere at almost 40,000 kilometres per hour with the rest of the Apollo 10 crew. Three years later, he became the last man to leave the Moon.
ANSWER: Eugene Andrew **Cernan**

7. In *Modern Times*, the Tramp wields an oil dispenser to prevent this from forming on the gears. For ten points each:
[10] When iron oxidizes, *this* reddish oxide will form as a patina.
ANSWER: **rust**
[10] In this technique, metals can be dipped in molten zinc to prevent rust. Its most common variant is the hot-dip form, and it derives its name from a concept in electrochemistry.
ANSWER: **galvanization**
[10] Stainless steel, which is highly resistant to rusting, is formed by alloying steel with this element, number 24 on the periodic table.
ANSWER: **chromium**

8. This character begins a relationship with Marie Cardona one day after hearing of his mother's death. For ten points each:
[10] Name this detached title character of *The Stranger* who shoots an Arab on a beach for no particular reason.
ANSWER: **Meursault**
[10] *The Stranger* was written by this absurdist author of an examination into the meaningless of life, *The Myth of Sisyphus* and the novel *The Plague*.
ANSWER: Albert **Camus**
[10] Both Meursault and Camus hail from this North African country, a former French colony. Camus died before the country could gain independence in the Evian agreements.
ANSWER: **Algeria**

9. Justices Harlan and White both wrote dissents for this case. For ten points each:
[10] This Supreme Court Case established the need for officers to inform arrestees of their right to an attorney.
ANSWER: ***Miranda** v. Arizona*
[10] Ernesto Miranda had been charged with this sexual crime, which comes from the Latin word for abduction.
ANSWER: **rape** or word forms
[10] This Chief Justice presided over *Miranda v. Arizona*, as well as *Brown v. Board of Education* in 1954.
ANSWER: Earl **Warren**

10. This man was one of the most important composers of the early Romantic period. For ten points each:
[10] Name this German composer of *Songs without Words* and a famous *Wedding March*. He also founded the Leipzig Conservatory.
ANSWER: Felix **Mendelssohn**-Bartholdy
[10] His *Wedding March* is the part of the music Mendelssohn composed for performances of this Shakespeare comedy set in Athens.
ANSWER: *A **Midsummer Night's Dream***
[10] Mendelssohn also composed this soaring concert overture, inspired by a visit to Fingal's Cave on an island off the west coast of Scotland. Its name comes from the archipelago containing that island.
ANSWER: The **Hebrides** Overture

11. His horse was named Streiff, and is now on display in Stockholm. For ten points each:
[10] Name this Swedish king, nicknamed the "Lion of the North," who participated in the Thirty Years' War.
ANSWER: **Gustavus Adolphus** or **Gustav II** Adolf
[10] This second largest Swedish city was founded twice, first by Charles IX in 1603 and then by Gustavus Adolphus in 1619, after the Danes had destroyed it.
ANSWER: **Gothenburg**
[10] At this 1632 battle, Bernhard of Saxe-Weimar successfully commandeered the Protestant Swedish army against Albrecht von Wallenstein after Gustavus Adolphus was killed during the fighting.
ANSWER: the Battle of **Lutzen**

12. This 2014 album is titled for its artist's year of birth. For ten points each:
[10] Name this first purely pop album by Taylor Swift, which features such hits as "Shake It Off" and "Blank Space".
ANSWER: *1989*
[10] This 1982 Prince release was his first top ten album in the United States. In the title track, he sings, "tonight I'm gonna party like it's" this year.
ANSWER: *1999*
[10] This was Dr. Dre's last album before a 16-year hiatus that ended with *Compton*. With an iconic black and green cover, this album contained the Grammy-winning song "Forgot About Dre".
ANSWER: *2001*

13. This type of text is one written about the life of Jesus. For ten points each:
[10] Mark, Matthew, Luke and John are evangelists who wrote some of the most famous examples of these religious texts, which also name a genre of spiritual music.
ANSWER: **Gospel**
[10] There are more Gospels than the canonical four; this category of gospel deals with the early life of Church founders.
ANSWER: **Infancy** Gospels
[10] This infancy gospel contains the earliest account of Mary's birth, and it is credited to the brother of Jesus.
ANSWER: Gospel of **James**

14. In this novel, Tertius Lydgate falls in love with Rosamond Vincy after arriving in the title town. For ten points each:
[10] Name this "Study of Provincial Life" set in the English Midlands.
ANSWER: *Middlemarch*, *A Study of Provincial Life*
[10] In Middlemarch, Dorothea Brooke marries this elderly Reverend in hopes of collaborating with him on his *Key To All Mythologies*. He amends his will to prevent Dorothea from marrying his cousin Will Ladislaw.
ANSWER: Reverend **Edward Casaubon**
[10] *Middlemarch* was created by this English author of *Silas Marner*.
ANSWER: George **Eliot** or Mary Ann **Evans**

15. Her first significant tournament win was the 1999 U.S. Open. For ten points each:
[10] Name this female tennis player who has won several Open and Olympic titles on a doubles team with her sister, Venus.
ANSWER: **S**erena **Williams**
[10] In a startling upset, the heavily favored Williams lost at the 2015 U.S. Open to this opponent, who as a doubles player has won each of the four Major tournaments.
ANSWER: Roberta **Vinci**
[10] Williams' loss to Vinci prevented her from accomplishing this feat. The last female tennis player to do this was Steffi Graf in 1988, though Graf nearly achieved it again in 1993, when she won three of her 22 career Singles titles.
ANSWER: **Calendar Grand Slam**, prompt on just "Grand Slam" if single year is not mentioned, prompt on anything having to do with winning the four Majors in a calendar year, do not accept or prompt on just a description of a Grand Slam

16. Commercially, these devices come in varieties including AA ["double-A"] and D-cell. For ten points each:
[10] This category of device has two terminals, used to allow the flow of electricity generated from chemical reactions to perform work.
ANSWER: **battery**
[10] This unit of electric potential is often used to classify batteries. By Ohm's Law, it is equal to current times resistance.
ANSWER: **volt**
[10] This measuring device can be used to identify a change in voltage; a specialized variety is the electrocardiogram.
ANSWER: **oscilloscope**, prompt on "volt-meter"

17. This man composed 6 works dedicated to Christian Ludwig, a German Margrave. For ten points each:
[10] Name this composer of the aforementioned *Brandenburg Concertos*, as well as the *Goldberg Variations* and *The Well-Tempered Clavier*.
ANSWER: Johann Sebastian (J.S.) **Bach**
[10] Many of Bach's fugues use this compositional technique common in other Baroque music. It is characterized by the harmonic interaction of several melodies.
ANSWER: **counterpoint**
[10] This Bach work is an operatic story of Lieschen's love of the title caffeinated substance. Its German title, translating to "Be still, stop chattering" aptly reflects the title substance's effect on drinkers.
ANSWER: *Coffee Cantata* or *Schweigt stille, plaudert nicht* if you're fluent in German

18. This man was wounded in the Battle of Lepanto, and supposedly conceived of his most influential work while in jail. For ten points each:
[10] Name this 16th century Spanish author of *Exemplary Novels* and *La Galatea*.
ANSWER: Miguel de **Cervantes** Saavedra
[10] Cervantes is perhaps better known for writing this novel, often considered the first European novel, about the title knight's exploits with his squire Sancho Panza.
ANSWER: *The Ingenious Gentleman **Don Quixote** of La Mancha*
[10] Don Quixote, needing a lady love to woo, designates this farm girl to the role. Although he never speaks with her, Don Quixote describes her as having golden hair and teeth like pearls.
ANSWER: **Dulcinea** del Toboso or **Aldonza Lorenzo**

19. After this vessel completed its main objective, Medea joined the crew. For ten points each:
[10] In Greek myth, Jason sailed with his crew to find the Golden Fleece on this boat, which lent its name to that group of heroes.
ANSWER: The **Argo** (accept **Argonauts**)
[10] In Norse myth, *Naglfar* is a boat made out of many of these body parts. It will carry dead people to fight with the Gods at Ragnarök.
ANSWER: finger**nails** or toe**nails**
[10] This god travelled in two boats: the morning boat, *Mandjet* and the evening boat, *Mesektet*.
ANSWER: **Ra**

20. He served as tutor to Alexander the Great. For ten points each:
[10] Name this Ancient Greek philosopher, a student of Plato.
ANSWER: **Aristotle**
[10] Aristotle wrote this text, in which he praises *Oedipus Rex* as the epitome of tragedy. He discusses the necessity of catharsis in tragedy in this work.
ANSWER: *Poetics*
[10] Aristotle taught at this Athenian school, named after one of Apollo's forms. Its initial location was a clearing in a forest.
ANSWER: **Lyceum**

21. Some scientists in this field are concerned with the accumulation of charges in cumulonimbus clouds. For ten points each:

[10] Name this field of study devoted to lightning.

ANSWER: **fulminology**

[10] One major advance in applied fulminology was this man's invention of the lightning rod. He also allegedly flew a kite attached to a key in a lightning storm.

ANSWER: Benjamin **Franklin**

[10] Franklin also determined that a storm does not always move in the same direction as this, another advance in meteorological studies.

ANSWER: **prevailing wind** (prompt on "wind")