



2013 VHSL Regionals
Round 3
First Period, Fifteen Tossups

1. This author based his character Mark Rampion on his friend D. H. Lawrence. He depicted himself as Philip Quarles in that same novel, *Point Counter Point*. He wrote a novel in which Podsnap's Technique speeds up reproduction and people regularly use the drug soma. That novel by this author takes place in the "year of Our Ford 632." For 10 points, name this English author who wrote about a dystopian future in *Brave New World*.

ANSWER: Aldous Huxley [or Aldous Leonard Huxley]

023-13-74-03101

2. This man is shown to the left of an empty chair draped with an ornate cloak, symbolizing rejected kingship, in a painting that shows him "resigning his commission." He is the subject of the Vaughan and Athenaeum portraits. His right hand stretches out over a red-draped table with a quill while his left hand holds a sword in the Lansdowne portrait; those three paintings of him are by Gilbert Stuart. For 10 points, identify this person whom Emmanuel Leutze depicted in a boat on icy waters "crossing the Delaware."

ANSWER: George Washington

019-13-74-03102

3. This genre, along with the canon, is found in a work based on a theme composed by Frederick the Great, *The Musical Offering*. Each work in this type is paired with a prelude in *The Well-Tempered Clavier*. This genre is defined by the presence of multiple lines of counterpoint being played at the same time. For 10 points, identify this musical genre, named for the Latin for "flight," which J.S. Bach used in a work titled for the "art" of this form.

ANSWER: fugues

019-13-74-03103

4. This narrative mode was employed in describing the intermediate space between being awake and asleep in "The Haunted Mind" by Nathaniel Hawthorne. Another work uses this style of narration in its odd-numbered chapters to prepare the reader for the next even-numbered chapter. That work is Italo Calvino's *If on a winter's night a traveler*. This narrative method is used in the *Choose Your Own Adventure* series of books. For 10 points, name this narrative mode in which the protagonist is called "you."

ANSWER: second-person narrative [or obvious equivalents]

023-13-74-03104

5. The inventor of this product abandoned his business interests in 1960 and spent the last fourteen years of his life as a missionary in Bolivia. In 1962, Homer Fesperman and Charles Weagley wrote the iconic jingle for this product, which notes that it's "fun for a girl or a boy." It was invented in 1946 by shipyard engineer Richard James, who demonstrated it at a Gimbel's store using an inclined plane. For 10 points, identify this toy which consists of a coiled spring.

ANSWER: Slinky

019-13-74-03105

6. After leaving office, this man served as the first president of the League to Enforce Peace. This signer of the Payne-Aldrich Tariff proposed income tax reforms in what eventually became the Sixteenth Amendment. This man's Secretary of State, Philander Knox, pursued "dollar diplomacy" in Latin America. This President faced a re-election bid against his predecessor, who ran for the Bull Moose Party. For 10 points, name this notably rotund President who succeeded Teddy Roosevelt.

ANSWER: William Howard **Taft**

192-13-74-03106

7. This man was the first host of a Canadian imitator of *American Bandstand* called *Music Hop*. In 1991, he hosted *To Tell the Truth* and *Classic Concentration* in addition to his primary job. This spokesman for Colonial Penn shaved off his iconic mustache in 2001 and hinted that he may retire in 2014 after thirty years behind the podium. For 10 points, name this Canadian-American who is introduced nightly by Johnny Gilbert as "the host of *Jeopardy!*"

ANSWER: George Alexander "Alex" **Trebek**

019-13-74-03107

8. The Ervin Committee investigated this event, during which Rose Mary Woods and CREEP were implicated. William Ruckelshaus resigned and Archibald Cox was dismissed in one part of this scandal called the Saturday Night Massacre. Woodward and Bernstein uncovered this scandal with the help of Mark Felt, who was codenamed "Deep Throat." For 10 points, name this political scandal in which a hotel was broken into under the orders of Richard Nixon, leading to his resignation.

ANSWER: **Watergate** scandal

192-13-74-03108

9. The synthesis of this compound requires tyrosine-194 to bind to its single reducing end. The synthesis of this compound uses UDP-conjugated monomers to form alpha-1,4-linkages, and a branching enzyme to generate alpha-1,6 linkages. This compound is broken down in response to glucagon, and it provides energy for about 6 hours during a fast. For 10 points, name this polymer of glucose, which is stored in the liver and often called animal starch.

ANSWER: **glycogen**

048-13-74-03109

10. This word was the name of a U.S. navy ship that was confused with an Egyptian vessel and attacked by the Israeli military in 1967. This word also names a class of cargo vessels that were built in around six weeks each during World War II. During World War I, sauerkraut was renamed this kind of cabbage. The "Sons of" this word were an anti-British society that staged the Boston Tea Party. For 10 points, give this word that, in the Pledge of Allegiance, is followed by "and justice for all."

ANSWER: "**liberty**"

019-13-74-03110

11. This man explained his concept of "spots of time" in his autobiographical poem *The Prelude*. An example of those occur in a poem where he remembers "mid the din of towns and cities" the scene of "steep and lofty cliffs" he saw with his sister five years earlier. This man explained his goal of using a "selection of language really used by men" in his 1802 preface to *Lyrical Ballads*, which included his "Tintern Abbey." For 10 points, name this Romantic poet and colleague of Samuel Taylor Coleridge.

ANSWER: William **Wordsworth**

121-13-74-03111

12. This element can express the fountain effect or creep up the walls of containers when cooled below the lambda point. This element was first observed via the D3 Fraunhofer spectral line in the chromosphere of the Sun. In stars, the proton-proton chain forms this element. The first known possible superfluid, this substance has the opposite effect of sulfur hexafluoride when inhaled, and its nuclei are the same as radioactive alpha particles. For 10 points, name this element, a noble gas with atomic number 2.

ANSWER: **helium**

104-13-74-03112

13. He wrote a novel in which the aristocrat Georges Hugon (JORJ hoo-GON) stabs himself when he fails to gain the love of Nana. He wrote about the strike organizer Étienne Lantier (LON-tey) in a collapsed mine in another novel. Future Prime Minister Georges Clemenceau published an open letter by this man in the newspaper *L'Aurore* (la ROR). For 10 points, name this French author of *Germinal* (jur-muh-NAL) who advocated for the release of Alfred Dreyfus in "J'accuse" (jahk-YOOZ).

ANSWER: Emile **Zola** [Emile-Edouard-Charles-Antoine **Zola**]

030-13-74-03113

14. This law's original form only applies to charge densities that do not vary with time. One method of modifying it is to consider the vacuum and electric field between two plates of a capacitor. Maxwell modified this law to include a term for displacement current. This law says that the line integral of $\mathbf{B} \cdot d\mathbf{l}$ is equal to μ times the enclosed current. For 10 points, name this law which gives the magnetic field of a wire, named for a Frenchman.

ANSWER: **Ampere's Law** [or **Ampere-Maxwell law**]

048-13-74-03114

15. In German, this tense is combined with words such as "vielleicht" (fee-LIKED) or "wohl" (VOAL) to express present probability. Dependent verbs in the perfect tense, pluperfect tense, and this tense move to the end of the independent clause. This tense is normally formed by placing the infinitive form of the verb after a conjugation of the auxiliary verb "werden" (VAIR-den). For 10 points, identify this German verb tense that indicates an action taking place at some point forward in time.

ANSWER: German **future** tense [or **Futur I**]

019-13-74-03115



1A. What city was the site of a tank standoff at Checkpoint Charlie and of Peter Fechter's death at its divisive Wall?

ANSWER: **Berlin**

1B. Jacintha Saldanha committed suicide in December 2012 after a hoax call from an Australian radio show convinced her to put DJs onto the phone in the room of what celebrity maternity patient?

ANSWER: Catherine "Kate" **Middleton** [or the **Duchess of Cambridge**]

2A. Name the peninsula that is connected to the Asian mainland by the Isthmus of Kra.

ANSWER: the **Malay** Peninsula

2B. Name the Scott Joplin piece, dedicated to "James Brown and his Mandolin Club," which sparked a ragtime revival when it was prominently featured in the 1973 film *The Sting*.

ANSWER: "The **Entertainer**"

3A. What quantity is equal to the energy released when an electron is added to a neutral atom?

ANSWER: **electron affinity**

3B. What symbol of Buddhism is the fig tree with heart-shaped leaves under which Siddhartha Gautama attained enlightenment?

ANSWER: **Bodhi** tree

4A. What three-word claim, penned, by philosopher Friedrich Nietzsche, implies that religion no longer guides people's acts in modern Europe?

ANSWER: "**God is dead**" [or "**Gott ist tot**"]

4B. Name the early comedian who directed and starred in the films *City Lights*, *The Great Dictator*, and *The Gold Rush*.

ANSWER: Charles Spencer "Charlie" **Chaplin**

5A. This is a 20-second calculation question. If sine of x equals $\frac{3}{5}$ and cosine of x equals $\frac{4}{5}$, what is sine of two times x ?

ANSWER: **24/25** [or **0.96**]

5B. This is a 20-second calculation question. Angle ABC has a measure of 20 degrees. What is the sum of the measures of the angles that are complementary and supplementary to angle ABC?

ANSWER: **230** degrees

6A. Which Chinese dynasty sent Zheng He on voyages into the Indian Ocean and fell to the Manchus in 1644?

ANSWER: **Ming** Dynasty

6B. What blind Theban prophet saw Odysseus in the underworld, changed genders, and warned Oedipus about his wife?

ANSWER: **Tiresias**

7A. The Coase theorem and the "tragedy of the commons" both deal with what concept in microeconomics, which refers to the unintended bad consequences for a third party that result from an economic activity?

ANSWER: negative **externalities**

7B. What section of the digestive tract consists of the ileum, jejunum, and duodenum?

ANSWER: **small intestine** [prompt on **intestine**]

8A. This is a 30-second calculation question. Two dice are each weighted such that a 6 will come up 50% of the time and the other five numbers will come up 10% of the time each. What is the probability that a roll of these two dice will sum to at least 11?

ANSWER: **0.35** [or **35%**; or **7/20**]

8B. This is a 30-second calculation question. Find the point of intersection of the lines $y = 2x + 5$ and $y = -4x - 7$.

ANSWER: **(-2, 1)** [or **x = -2 and y = 1**]

9A. What layer of the earth's atmosphere contains the entirety of the ozone layer and is located above the troposphere?

ANSWER: **stratosphere**

9B. In what state's 2012 Senate election did Shelley Berkley lose to Dean Heller, who was running for a full term after being appointed to replace the resigned Jon Ensign?

ANSWER: **Nevada**

10A. What integration technique, related to the chain rule for derivatives, involves rewriting the integrand in a more manageable form and then changing it back after performing the integration?

ANSWER: integration by u-**substitution** [or word forms]

10B. What term refers to the random movement of a particle, such as pollen, in a fluid?

ANSWER: **Brownian** motion



1. One of this man's poems begins, "My long two-pointed ladder's sticking through a tree toward heaven still," and he mentions a "dimpled spider, fat and white" in another poem. This poet of "After Apple Picking" and "Design" wrote a poem which closes with the line, "Good fences make good neighbors." Another of his poems includes mentions of a path which was "grassy and wanted wear" amid a "yellow wood." For 10 points, name this poet of "Mending Wall" and "The Road Not Taken."

ANSWER: Robert **Frost** [or Robert Lee **Frost**]

189-13-74-03117

2. The bell of the *U.S.S. Endicott* is now found at a church within this complex, the Evergreen Chapel. This complex is the home of the Aspen Lodge, and is found within Catoctin Mountain Park near Thurmont. Originally known as Shangri-La, this location was renamed in 1953 after Dwight Eisenhower's grandson. For 10 points, name this designated rural retreat of U.S. Presidents, the site of several diplomatic summits including landmark 1978 "accords" between Egypt and Israel.

ANSWER: **Camp David**

019-13-74-03118

3. This emperor defeated Lucius Antonius in a campaign in Perusia. The *Res Gestae* in Ankara features an inscription detailing this ruler's conquests and deeds. This ruler gained political leverage by marrying Scribonia, and rued the Roman loss to Arminius at the Battle of Teutoburg Forest. This man formed the Second Triumvirate with Lepidus and another man, whom this leader defeated at the Battle of Actium. For 10 points, name this man who defeated Mark Antony and was the first Roman Emperor.

ANSWER: **Augustus** Caesar [or Gaius Julius Caesar **Octavianus**; or **Octavius**]

192-13-74-03119

4. This compound is split by a complex containing a manganese center that receives electrons from tyrosine residues; that complex is found in photosystem II. This compound is the final product of complex IV of the electron transport chain. Phospholipids have a head group that has an affinity for this substance and a tail group that doesn't, creating a bilayer when dissolved in this substance. For 10 points, name this compound, a universal solvent with formula H₂O.

ANSWER: **water** [or **H₂O** until it is read]

048-13-74-03120

5. Parts of this law were invalidated by the Peace of Alès (ah-LAY) thirty years later. Disputes caused by it were heard in the Chambre de l'Edit (SHOMB-breh del-EE-deet). This law guaranteed eight years of safety for currently occupied fortresses, which it termed "places de surete" (PLASS day soor-ey-TAY). This law was completely revoked in 1685 by Louis XIV's Edict of Fontainebleau. For 10 points, name this 1598 promulgation by Henry IV that protected Huguenots in France.

ANSWER: **Edict of Nantes** [or **Edit De Nantes**]

019-13-74-03121

6. In one poem by this author, each of three stanzas ends with the question, "But, what of that?" She began another poem with the declaration, "I'm nobody! Who are you?" She compared the "stillness in the room" with the "stillness in the air" in another poem, in which she described the title noise from an insect as "uncertain" and "stumbling." For 10 points, identify this "Belle of Amherst" who wrote "I heard a fly buzz when I died" and "Because I could not stop for Death."

ANSWER: Emily **Dickinson**

189-13-74-03122

7. This player drew a walk from Aroldis Chapman and singled off R.A. Dickey in the 2012 All-Star Game. He was called up from the Salt Lake City Bees at the end of April following the release of Bobby Abreu (ah-BRAY-oo). He went on to become the youngest player to hit thirty home runs and steal thirty bases in the same season. He controversially lost the AL MVP award to Triple Crown winner Miguel Cabrera. For 10 points, name this rookie phenom, the center fielder for the Los Angeles Angels.

ANSWER: Michael Nelson "Mike" **Trout**

019-13-74-03123

8. This particle is part of a group that includes the muon and tau. They were fired at a nickel target by Davisson and Germer to show that they have wavelike properties. These particles are emitted when a neutron turns into a proton during beta-minus decay, and they were discovered in a Crookes tube by JJ Thompson as the primary constituent of cathode rays. For 10 points, name these negatively charged leptons that orbit the nucleus.

ANSWER: **electron**

048-13-74-03124

9. The title character of this novel defeats the Knight of the Mirrors, whom he discovers to be the student Samson Carrasco. Carrasco later defeats the main character of this novel as the Knight of the White Moon, forcing him to retire from a life he took up after reading too many romance novels. The title character of this novel rides Rocinante (roh-sih-NAHN-tay) and is assisted by Sancho Panza. For 10 points, name this Spanish novel written by Miguel de Cervantes.

ANSWER: **Don Quixote** [or *The Ingenious Hidalgo* **Don Quixote** of La Mancha; or *El Ingenioso Hidalgo* **Don Quijote** de la Mancha]

023-13-74-03125

10. This scientist wrote "The Chronology of Ancient Kingdoms," which suggests his belief in Atlantis. He proposed that light was made up of corpuscles in his work *Opticks*. William Stukeley wrote about this man being in the garden where he wondered why a certain object descended perpendicularly to the ground. His most important theories are described in his 1687 work known as *Principia*. For 10 points, name this English physicist who theorized universal gravitation and proposed three laws of motion.

ANSWER: Sir Isaac **Newton**

052-13-74-03126

11. The narrator of one of this man's poems is "being read to by a boy, waiting for rain," and the narrator of another of his poems remarks, "No! I am not Prince Hamlet, nor was meant to be." In addition to writing "Gerontion," this poet wrote of a room in which "women come and go talking of Michelangelo." Another of his poems includes sections titled "A Game of Chess" and "The Burial of the Dead." For 10 points, identify this poet who wrote "The Love Song of J. Alfred Prufrock" and "The Waste Land."

ANSWER: T. S. **Eliot** [or Thomas Stearns **Eliot**]

189-13-74-03127

12. The fundamental theorem of arithmetic is a corollary of this man's first theorem. He names a method in which the larger of two numbers is replaced by the remainder formed when the numbers are divided, used to calculate the greatest common divisor. He showed that there are an infinite number of primes. His fifth postulate is that there is only one line parallel to a given line which passes through a given point. For 10 points, name this Greek "father of geometry," the author of the *Elements*.

ANSWER: **Euclid** of Alexandria

190-13-74-03128

13. This author wrote a novel in which the female mountaineer Allie Cone is killed by her lover. In that book, he described two actors trapped on a hijacked plane that explodes over the English Channel. This man created a character born on August 15, 1947, who possesses telepathic powers. His protagonists include Saleem Sinai, who is born at the moment of India's independence. For 10 points, name this Indian author who became the target of an Iranian *fatwa* after writing *The Satanic Verses*.

ANSWER: Salman **Rushdie** [or Ahmed Salman **Rushdie**]

052-13-74-03129

14. Cultural centers in this city include the botanic gardens at Kirstenbosch and the Newlands cricket and rugby stadium. The original northwestern border of this city was the Signal Hill and Lion's Head ridges. A cloud cover known as "the tablecloth" sits outside of this city, which overlooks False Bay. This city shares governmental responsibilities with Bloemfontein and Pretoria. For 10 points, name this legislative capital of South Africa, which is near a feature "of Good Hope."

ANSWER: **Cape Town**

019-13-74-03130

15. According to Koopman's theorem, the energy required for this process equals the energy of the highest occupied molecular orbital. For this to happen, an electron must reach a potential energy of zero. When a gas is heated to very high temperatures, this phenomenon occurs, and the gas becomes plasma. Helium has the largest value of any element for the namesake "energy" of this process. For 10 points, name this process in which an atom loses an electron and acquires a positive charge.

ANSWER: **ionization** [or **forming ions**; or **losing** an **electron**; or becoming **positively charged**]

190-13-74-03131



1. One newlywed in this play exclaims, "Sweet lord, you play me false," in a chess game with her husband Ferdinand. The deity Setebos and the "foul witch" Sycorax are unseen characters in this play, in which Antonio and Sebastian plot against King Alonso of Naples. In this play, the monstrous slave Caliban and the spirit Ariel are employed by the usurped magician Prospero, who lives in a hut on the beach. For 10 points, name this Shakespeare play set on an island in the hours after a heavy storm.

ANSWER: *The Tempest*

104-13-74-03132

2. One incident that took place during this man's presidency was investigated by the Tower Commission. Jerry Parr protected this President from gunshots outside the Washington Hilton Hotel. U.S. forces invaded Grenada during this man's presidency. John Hinckley attempted to assassinate this President, who advocated supply-side economics. For 10 points, identify this former actor and governor of California who was President during the Iran-Contra affair in the 1980s.

ANSWER: Ronald Wilson Reagan

189-13-74-03133

3. DMF and DMSO are "polar aprotic" examples of compounds which serve this purpose for organic syntheses. Although once used as an anesthetic, diethyl ether is now most often used as one of these. Compounds which are used for this purpose should have a high volatility and low boiling point, so that they can easily be distilled or evaporated out. For 10 points, name these compounds which make up the majority of a solution's volume, and which dissolve solutes.

ANSWER: solvents

190-13-74-03134

4. A popular program that implements this process is GnuPG. The most popular form of this process relies on the difficulty in factoring prime numbers and is RSA, an example of the public key type of this process. Replacing a letter of the alphabet with one that is a fixed number of spaces away is a form of it known as the Caesar cipher. This process is performed on plaintext. For 10 points, name this process of encoding information so that only certain people can see it.

ANSWER: encryption [prompt on cryptography]

149-13-74-03135

5. In one of this man's poems, the narrator remarks how he "looked up in perfect silence at the stars." In addition to writing "When I Heard the Learn'd Astronomer," this poet wrote about how "the great star early drooped in the western sky in the night" in the elegy "When Lilacs Last in the Dooryard Bloomed." Another of his poems begins, "I celebrate myself, and sing myself." For 10 points, identify this poet of "Song of Myself" who wrote the collection *Leaves of Grass*.

ANSWER: Walt Whitman [or Walter Whitman]

189-13-74-03136

This is a calculation question. What is the cotangent of 240 degrees?

ANSWER: one divided by the square root of three [or square root of 3 divided by 3; or radical 3 over 3; or one over radical 3]

What letter, which warns against political factionism, was written in 1796, a few months before its author's departure from the Presidency?

ANSWER: George Washington's Farewell Address