



2013 VHSL Districts  
Round 2  
First Period, Fifteen Tossups

1. In this state, Republicans reportedly engineered the Brooks Brothers riot. Many people came to this state after leaving Mariel harbor. Its Secretary of State, Katherine Harris, made a controversial decision in the wake of irregularities involving "hanging chads" and "butterfly ballots." That decision in this state was supported by the Supreme Court case *Bush v. Gore*. For 10 points, name this state, the site of intense recount battles during the presidential election of 2000.

ANSWER: **Florida**

052-12-73-02101

2. One of this artist's paintings depicts a man holding onto the sails during a miracle of Jesus. That work, *The Storm on the Sea of Galilee*, has not been recovered since its theft in 1990. Another of this artist's works shows several people looking on as a man shows off the arm muscle of a corpse. In another painting by this artist, a man holding a blue and yellow flag stands behind a man wearing a red sash. For 10 points, name the Dutch artist who painted *The Anatomy Lesson of Dr. Nicolaes Tulp* and *The Night Watch*.

ANSWER: **Rembrandt** Harmenszoon van Rijn

140-12-73-02102

3. One character in this novel, who drowns in the river, is the villainous Compeyson. Another character lives in a mock castle with his father, whom he calls "Aged Parent." That character, John Wemmick, works for the lawyer Mr. Jaggers. One character in this novel always wears her wedding dress and is the adopted mother of Estella. The protagonist suspects Miss Havisham is his benefactor, but it turns out to be a convict named Abel Magwitch. For 10 points, name this Charles Dickens novel about Pip.

ANSWER: **Great Expectations**

052-12-73-02103

4. Adherents to this religion sing the Sodar hymns at sundown. This religion espouses an attitude called "Chardi Kalah," and its prayers are called "ardas." Practitioners of it worship in places called gurdwaras, and carry around a dagger known as the kirpal, one of this religion's "five K's." Its holiest site is the Golden Temple, in Amritsar, and its holy text is the Adi Granth. For 10 points, name this religion originating in India, where it was founded by Guru Nanak.

ANSWER: **Sikhism**

192-12-73-02104

5. The protagonist of this novel slaughters a pig to fake his own death while escaping a cabin and gives some money for safekeeping to Judge Thatcher. The protagonist of this work resolves to set out for Indian country after an overdrawn sequence on the Phelps' farm. The Duke, the Dauphin, the Grangerfords and the Shepherdsons are all encountered as this novel's title character travels downriver with the slave Jim. For 10 points, name this Mark Twain novel about a friend of Tom Sawyer.

ANSWER: *The Adventures of* **Huckleberry Finn** [or **Huck Finn**]

080-12-73-02105

6. A common positive azeotrope consists of 96% ethanol and 4% of this substance. On a PT diagram, this substance's melting point line has a negative slope. Adding an Arrhenius base to an Arrhenius acid always produces this substance, which is produced with carbon dioxide in all combustion reactions. This substance's specific heat is 4.18 joules per gram degree Celsius, as a result of its strong ability to hydrogen bond to itself. For 10 points, name this compound with formula H<sub>2</sub>O.

ANSWER: water [or H<sub>2</sub>O until it is read]

190-12-73-02106

7. An annual tradition on this river is the rounding up of swans or "swan upping." In the eighteenth century, "mudlarks" scavenged this river, which was heavily contaminated by human waste in the 1858 Great Stink. At its point of Teddington Lock, it was the assembly point for the flotilla used in the Dunkirk evacuation. Thorney Island, on this river, was where Westminster Abbey was built. For 10 points, name this longest river entirely in England, which flows through London.

ANSWER: River Thames

052-12-73-02107

8. In one of his short stories, the narrator and Mahony skip school and meet a man described as a "queer old jossler." In another of his stories, Gretta hears "The Lass of Aughrim," reminding her of Michael Furey. This author of "The Dead" wrote a novel containing Father Arnall's sermon on hell. That work centers on Stephen Dedalus, who also appears in a novel by this man about Leopold Bloom. For 10 points, name this Irish author of *A Portrait of the Artist as a Young Man* and *Ulysses*.

ANSWER: James Joyce [or James Augustine Aloysius Joyce]

192-12-73-02108

9. The first foreigner to climb this mountain was diplomat Rutherford Alcock. Many people visit this peak because of the 1960 novel *Sea of Trees*. The government put up signs around it reading "Your life is a precious gift." A forest at this mountain's base is said to be the home of demons. That forest is named Aokigahara and, like this peak, is located on Honshu Island. For 10 points, name this highest mountain in Japan.

ANSWER: Mount Fuji

052-12-73-02109

10. The composer of this piece donated a full score of it to the Foundling Hospital in London. Its second part features a tenor singing about enemies being broken with a "rod of iron," followed by a soprano singing "I know that my Redeemer liveth." This piece's most famous section inspired King George II to stand. This work's beginning references Isaiah's prophecy of salvation. For 10 points, name this oratorio composed by George Frideric Handel which features the "Hallelujah Chorus."

ANSWER: Messiah

052-12-73-02110

11. Much of the drama of this novel begins with one character's comment that he is "in no humor at present to give consequence to young ladies who are slighted by other men." A plot twist occurs in this novel when Lydia elopes with the scheming soldier Charles Wickham. In the end, Charles Bingley marries the central family's eldest daughter, Jane, and Fitzwilliam Darcy marries Elizabeth. For 10 points, name this novel about the Bennet family written by Jane Austen.

ANSWER: Pride and Prejudice

014-12-73-02111

12. Thomas Wyatt introduced this form to England, and Gerard Manley Hopkins used its "curtal" form for "Pied Beauty." This form often includes a midway shift in argument called a *volta*. Edmund Spenser's *Amoretti* is an example of a "sequence" of these poems. One of these poems calls the addressee "more lovely and more temperate" after beginning, "Shall I compare thee to a summer's day?" For 10 points, name this fourteen-line poetic form invented by Petrarch and often used by William Shakespeare.

ANSWER: sonnets

080-12-73-02112

13. This organelle is extracted intact using the NP-40 detergent. This organelle can be observed using Hoechst staining, which helps visualize its Cajal (kuh-HAL) bodies. It has namesake "pores" that have alpha-solenoid and beta-propeller folds. Red blood cells lack this organelle, which has one subdivision that is the site of ribosome synthesis. It is surrounded by a namesake "envelope" and contains chromosomes. For 10 points, name this organelle that holds much of the cell's genetic material.

ANSWER: cell nucleus

192-12-73-02113

14. One unsuccessful assassin in this modern-day country tried to jump into a river near the Latin Bridge, only to find it was five inches deep. In this country, Dutch peacekeepers failed to protect a UN-designated safe haven from massacre at Srebrenica, a largely Muslim town. This modern-day nation is where Black Hand affiliate Gavrilo Princip took aim at the Austro-Hungarian empire's heir apparent. For 10 points, name this former Yugoslav state attacked in the 1990s by Croats and Serbs, with capital at Sarajevo.

ANSWER: Bosnia and Herzegovina [or Bosna i Hercegovina]

104-12-73-02114

15. This operation is applied after setting up a ratio or root operation in a test for convergence. If a function  $f$  is bounded by two functions  $g$  and  $h$  with a value  $L$  for this operation, then this operation on  $f$  also yields  $L$  according to the squeeze theorem. Indeterminate forms in this operation can be simplified by taking derivatives using L'Hopital's Rule. A right arrow is used to denote the approach to one of these. For 10 points, name this operation, the value of a function as it approaches a particular point.

ANSWER: limit

189-12-73-02115



1A. What Danish proto-existentialist described issues of faith in God in *Fear and Trembling*, *The Sickness Unto Death*, and *Either-Or*?

ANSWER: Søren Aabye **Kierkegaard** [or Johannes de **Silentio**; or Victor **Eremita**; or William **Afham**; or Frater **Taciturnus**; or Constantin **Constantius**; or Vigilius **Haufniensis**; or Nicolaus **Notabene**; or A.B.C.D.E.F. **Godthaab**; or A.B.C.D.E.F. **Rosenblad**; or **Inter et Inter**; or **Procul**; or Captain **Scipio**; or **Judge William**; or **A.F.**; or Hilarius **Bookbinder**; or Johannes **Climacus**; or **H.H.**; or **Anti-Climacus**; prompt on **A**; prompt on **B**]

1B. What organelles in animal cells break down waste materials and are sometimes called “suicide-sacs”?

ANSWER: **lysosomes**

2A. In which U.S. state are the cities of Parma and Dayton found?

ANSWER: **Ohio**

2B. In a controversial 1961 experiment, what did psychologist Stanley Milgram manage to convince many participants to do on order of authority figures?

ANSWER: **administer shocks** to people [or any answers involving **shocking** or **electrocuting** people; prompt on **hurt** or **harm** people]

3A. What son of Nyame (nee-AH-may) was a trickster deity from West Africa who was often depicted as a spider?

ANSWER: **Anansi**

3B. The "last theorem" of what French mathematician was solved by Andrew Wiles?

ANSWER: Pierre de **Fermat**

4A. This is a 20-second calculation question. Find the square of the quantity "4 x squared plus 2 x."

ANSWER: **sixteen** times **x raised to the fourth power plus sixteen** times **x-cubed plus four x-squared** [or **16x^4+16x^3+4x^2**]

4B. This is a 20-second calculation question. You have a standard 52-card deck, from which you draw a card, shuffle it back in, and then draw a card again. In simplest form, what is the probability that the first card is a club, and the second card is a king?

ANSWER: **1/52**

5A. What element with atomic number 2 is the lightest noble gas, as well as the only one lacking eight electrons in its outer shell?

ANSWER: **helium**

5B. What author of "The Origin of Continents and Oceans" is best known for formulating the theory of continental drift?

ANSWER: Alfred Lothar **Wegener**

6A. What Danish toy company's product lines include Ninjago and Hero Factory, a spiritual successor to its BIONICLE figures?

ANSWER: The **Lego** Group

6B. "Der Holle Rache" (dare HAH-luh ROCK-uh) is an aria sung by the Queen of the Night in what Mozart opera named after an instrument?

ANSWER: *The Magic Flute* [or *Die Zauberflote*]

7A. This is a 30-second calculation question. A trapezoid has an area of 33 square inches, and a height of 3 inches. If one base is two inches longer than the other, find the length of the longer base.

ANSWER: 12 inches

7B. This is a 30-second calculation question. In triangle ABC, side AB is 10, side BC is 8, and the area of the triangle is 30. Find the sine of angle B.

ANSWER: 3/4 [or 0.75]

8A. What Stanley Kubrick film begins with man-apes learning how to use tools from a black monolith, but mostly takes place on a space voyage to Jupiter?

ANSWER: 2001: *A Space Odyssey*

8B. What language, mutually understandable with Urdu, is written in the Devangari (DEH-vuh-nuh-GAR-ee) script and is one of the official languages of India?

ANSWER: Hindi

9A. Which monarch had Otto von Bismarck step down as chancellor and served as the final kaiser of Germany?

ANSWER: Wilhelm II of Germany [or William II; or Friedrich Wilhelm Viktor Albert; prompt on Wilhelm]

9B. What position in baseball is signified by a "2" on the scoresheet and was played by Hall of Famers Yogi Berra and Johnny Bench?

ANSWER: catcher

10A. What Scottish biologist discovered the enzyme lysozyme and the antibiotic penicillin?

ANSWER: Sir Alexander Fleming

10B. What British author wrote *Far From the Madding Crowd* and the depressing *Jude the Obscure*?

ANSWER: Thomas Hardy



2013 VHSL Districts  
Round 2  
Third Period, Fifteen Tossups

1. One work by this author concerns Scratchy Wilson and Jack Potter, and another of this author's stories begins with the line, "None of them knew the color of the sky." The aforementioned story by this author includes an oiler, a captain, a cook, and a correspondent. This author of "The Bride Comes to Yellow Sky" and "The Open Boat" also wrote a novel in which the Tattered Man and Jim Conklin are encountered by Henry Fleming. For 10 points, name this American author of *The Red Badge of Courage*.

ANSWER: Stephen Crane

189-12-73-02117

2. The core low level part of this company's API is the Foundation Framework. While it's not Mozilla, many basic classes in its API are prefixed with NS. This company makes extensive use of the LLVM compiler project, employing its head developer. Cocoa is this company's main API. It promotes the use of Objective-C and puts out the Xcode IDE for development on its platform. For 10 points, name this company that created the iOS operating system, which is used on its iPhone.

ANSWER: Apple Inc. [or Apple Computer Inc.; or AAPL]

001-12-73-02118

3. One character in this work makes a plan to deal sporting goods in Florida, only to realize that Bill Oliver does not know who he is. Other characters in this work include Bernard and Howard Wagner, who fires the protagonist. A flashback in this play concerns the protagonist's cheating on Linda, and that protagonist is envious of his wealthy brother Ben. In this work, Biff and Happy are the troubled sons of the suicidal Willy Loman. For 10 points, name this play by Arthur Miller.

ANSWER: Death of a Salesman

189-12-73-02119

4. In the photoelectric effect, the maximal value for this quantity is the product of Planck's constant and frequency, minus the work function. This quantity can be expressed as the square of linear momentum over two times the mass. The difference in this quantity is canonically said to be equal to work, and its usual representation is one-half times mass times velocity squared. For 10 points, identify this energy of motion, which is contrasted with potential energy.

ANSWER: kinetic energy [prompt on energy]

189-12-73-02120

5. Congress gave this President a blank check to use American forces with the Formosa Resolution. This President's CIA launched coups to overthrow Mohammed Mossadegh in Iran and Jacobo Arbenz in Guatemala. His threat to withdraw support for the British pound helped end the Suez Crisis. This President's Secretary of State, an advocate of "brinkmanship," was John Foster Dulles, and his Vice President was Richard Nixon. For 10 points, name this President from 1953 to 1961.

ANSWER: Dwight David Eisenhower

080-12-73-02121

6. This force is described by the Schwarzschild metric. This force is theorized to be carried by a massless, chargeless particle with a spin of 2. Lagrange points indicate locations where this force achieves equilibrium. An inverse-square law describing this force was published in the *Principia*. An object's mass determines the magnitude of this force on an object, which is called weight. For 10 points, name this purely attractive force that, on Earth, causes objects to fall to the ground.

ANSWER: **gravity**

014-12-73-02122

7. This commander used rapidly-moving infantry he called his "foot cavalry" to prevent Union forces from reinforcing McClellan in the Valley Campaign. Before the Civil War, this man taught science at VMI. This man launched a devastating flank attack on the largely-German XI Corps at the Battle of Chancellorsville, where he was shot by his own forces. For 10 points, name this Confederate general who earned his nickname for holding his ground at the First Battle of Bull Run.

ANSWER: Stonewall **Jackson** [or Thomas Jonathan **Jackson**]

080-12-73-02123

8. A politician in this country was accused of condoning a 2006 incident of police brutality, which began after flower vendors were evicted from a market. Students opposed to that politician launched the "I am the 132nd" movement here. The Party for the Democratic Revolution once again finished second in this country's 2012 presidential race, which ended twelve years of PAN government and put the PRI back in power. For 10 points, name this country where Enrique Peña Nieto was elected president.

ANSWER: **Mexico** [or **Estados Unidos Mexicanos**; or **United Mexican States**]

019-12-73-02124

9. In one of this author's poems, a husband promises to bring his wife Amy back by force when she leaves in grief at seeing her son's grave. This author of "Home Burial" wrote another poem whose speaker repeatedly hears the refrain, "Good fences make good neighbors." This poet recited "The Gift Outright" at JFK's inauguration, wrote "Mending Wall," and opened another poem by describing two roads that "diverged in a yellow wood." For 10 points, name this American poet of "The Road Not Taken."

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

080-12-73-02125

10. One holder of this office, who dealt with the "disappearing quorum" procedure, was Thomas Brackett Reed. "Uncle Joe" Cannon and Texas Democrat Sam Rayburn held this office. A recent one had gained fame by proposing the 1994 "Contract with America." By the Twenty-Fifth Amendment, its holder follows the Vice President in presidential succession. For 10 points, name this highest office held by Newt Gingrich and John Boehner, the leader of the larger house of Congress.

ANSWER: **Speaker of the House** [or **Speaker of the United States House of Representatives**]

104-12-73-02126

11. One event in September 2012 in this city involved negotiations with David Vitale. That event in this city also involved the leader of CORE calling for action after talks in this city broke down. Karen Lewis heads the CTU in this city, which led a strike for eight days in September 2012 that resulted in over 300,000 children staying home from school. For 10 points, name this city that experienced a teachers' strike and is led by Mayor Rahm Emanuel.

ANSWER: **Chicago**

023-12-73-02127

12. A prisoner named Aileen Morgan on this show kills herself with a pair of glasses after providing false information to get a window for one day. On this show, the Vice-President's son gets off free despite killing a pedestrian in a hit-and-run out on a date. Based on the Israeli show *Hatufim*, it begins with the return of a U.S. Marine who had been imprisoned by Abu Nazir. For 10 points, name this TV show on which Claire Danes plays Carrie Mathison, who suspects that Nicholas Brody is an al-Qaeda agent.

ANSWER: Homeland

080-12-73-02128

13. A seer in this play relates how a gall bladder exploded and dark liquid oozed from an animal's thighs when he was performing an augury due to the carrion around the city. In this play, Haemon stabs himself in front of his father after the title character is found dead in a cave outside Thebes. Its central conflict is between Creon, who enforces the laws of his city, and the title character, who piously buries her brother. For 10 points, name this Sophocles play about a daughter of Oedipus.

ANSWER: Antigone

080-12-73-02129

14. This leader's deeds, recorded on an inscription in what's now Ankara, are related in the *Res Gestae*. Before coming to power, he fought Sicilian pirates alongside Lepidus. This husband of Livia Drusilla left many troops to Vipsanius Agrippa, who earned this man a naval victory over Egypt at Actium. This leader took a name meaning "revered one" in 27 BCE. For 10 points, name this nephew of Julius Caesar, the first Roman emperor.

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

104-12-73-02130

15. A set of organic reactions that goes by this name includes the halogenation of alkenes or alkynes. The "half" type of a computer circuit designed for this operation lacks a carry-in bit. The performance of this mathematical operation on a sequence yields a series. This operation is performed on the previous two numbers in the Fibonacci sequence to yield the third. For 10 points, name this basic arithmetic operation whose negative version is subtraction.

ANSWER: addition [or word forms]

104-12-73-02131





1. Proteins can be analyzed using the "size-exclusion" form of this process. One form of this process often uses a silica gel. The retention and retardation factor are usually calculated as the quotient of two distances in this procedure. This process comes in "high-performance liquid", "gas", and "thin-layer" forms, but always uses a stationary phase and a mobile phase. For 10 points, name this method of separating two substances by their relative speeds at traveling through a solvent.

ANSWER: chromatography [or any specific type of chromatography]

190-12-73-02132

2. One character created by this author befriends Plinio Designori and drowns in the presence of his son. That character spends time in Castalia. Another character created by this man meets Pablo and Hermine. In addition to creating Joseph Knecht and Henry Haller, this author wrote about a youth who leaves home with Govinda to seek enlightenment. For 10 points, identify this German-Swiss author who wrote *The Glass Bead Game*, *Steppenwolf*, and *Siddhartha*.

ANSWER: Hermann Hesse

189-12-73-02133

3. Some cells in this organ are "Merkel" cells, while projections on it are called rete (REET) ridges. Affected by Grover's disease, this organ has one part subdivided into the stratum granulosum (GRAN-you-low-sum) and the stratum spinosum. It contains various mechanoreceptors. Major cell types in this organ include keratinocytes (care-UH-tin-OH-cytes). For 10 points, name this largest organ of the human body, which serves as a major physical barrier and is divided into the dermis and epidermis.

ANSWER: skin [or dermis; or epidermis until it is read]

052-12-73-02134

4. A leader of this country attempted to conspire with Queen Victoria to battle Islam; that leader of this country was Tewodros II. The Declaration of Socialism was made by a ruling junta known as the Derg in this country in 1974. In the 1896 Battle of Adowa, Menelik II of this nation embarrassed a European power. This country became part of Italian East Africa after a 1934 invasion. For 10 points, name this East African nation that Haile Selassie ruled from Addis Ababa.

ANSWER: Federal Democratic Republic of Ethiopia [or Ityop'iya Federalawi Demokrasiyawi Ripeblik]

030-12-73-02135

5. These particles interact with a strong electric field to produce an electron and a positron in pair production, and they're represented on a Feynman diagram using gamma. A high-frequency one of these loses energy in Compton scattering. Their energy is equal to Planck's constant times frequency, and they mediate the electromagnetic force. For 10 points, identify these particles that are the quanta of light.

ANSWER: photon

189-12-73-02136

This is a calculation question. If "the absolute value of quantity x minus 5" is less than or equal to 7, what is the range of possible x values?

ANSWER: -2 less than or equal to x less than or equal to 12 [or [-2, 12]; or between -2 and 12, inclusive; or closed interval -2 to 12]

What Herman Melville character tells his employer "I would prefer not to" when assigned any task?

ANSWER: Bartleby the Scrivener