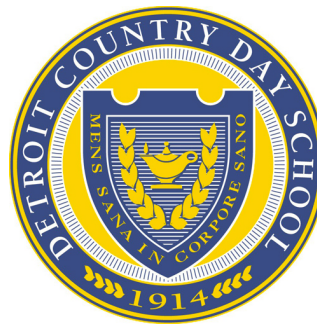


## Detroit Country Day Academic Regular Tournament II

### Packet 6

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Special thanks to Neil Gurram

1. **For two orbiting bodies, the derivative of area swept out with respect to time equals one-half of this quantity over mass. In an orbit, the cross product of  $p$  and this quantity minus a radial vector equals the conserved Laplace-Runge-Lenz vector. A rotationally symmetric Lagrangian means that this quantity is conserved by (\*) Noether's theorem.** Net torque is the derivative of this quantity with respect to time. The conservation of this quantity is shown with an ice skater bringing her arms inwards to spin faster and this quantity is equal to moment of inertia times angular velocity. For 10 points, name this rotational analog of linear momentum.

ANSWER: **angular momentum** [do NOT accept or prompt on "(linear) momentum"]

<Physics, Chapman> [Ed.]

The so-called "Beeching Axe" severed parts of a British one of these systems in the 1960s. For 10 points each:  
[M] Isambard Kingdom Brunel designed a "Great Western" example of what kind of system?

ANSWER: **railroads** [accept equivalents such as **train tracks**; accept Great Western **Railroad**]

[H] This Prime Minister commissioned the Beeching report to investigate the state of British railroads. Christine Keeler's affair with his Defence Minister, John Profumo, led to this man's political downfall.

ANSWER: Maurice Harold **Macmillan**, 1st **Earl of Stockton** [accept either underlined portion]

[E] Ernest Marples, a member of this party, carried out the Beeching cuts while Transport Minister. Harold Macmillan led this party to a landslide victory over the Labour party in 1959.

ANSWER: **Conservative** Party [or **Tories** or **Tory** Party]

<European History, Hartung> [Ed.]

2. **A character in this play who "see all sides of a question" drives another to suicide by telling him to "get the hell out of life." In this play's first scene, the black gambler Joe Mott explains why he would shoot an anarchist, but not a socialist. The police officers Moran and Lieb arrest a man in this play who confesses to murdering his (\*) wife Evelyn.** As Larry Slade stares out the window in this play's final scene, he hears Don Parritt fall from the fire escape. Hickey tries to convince his friends to abandon their "pipe dreams" at Harry Hope's Saloon in, for 10 points, what play by Eugene O'Neill?

ANSWER: *The **Iceman Cometh***

<U.S. Literature, Joshi> [Ed.]

The Maxam-Gilbert type of this technique employs radiolabeled phosphorus, while its “shotgun” type breaks molecules into many small fragments. For 10 points each:

[M] Name this lab technique whose Sanger [SAYNG-ur] type involves chain termination via ddNTPs [D-D-N-T-P’s].

ANSWER: DNA **sequencing** [or gene **sequencing** or genome **sequencing**]

[E] DNA sequencing can be used to estimate the dates of past epidemics using molecular clocks, which track the rates of these things. These alterations to an organism’s genome may be harmful, neutral, or beneficial.

ANSWER: **mutations**

[H] The results of DNA sequencing are compared to existing data in a process called alignment, often done with this algorithm hosted on the NCBI [N-C-B-I] website. This search tool has largely replaced FASTA [fast-AY].

ANSWER: **BLAST** [blast] [or **basic local alignment** search tool]

<Biology, Melkumian> [Ed. Yin]

3. **This thinker believed that social comparison corrupted humanity by producing a change between two types of self-regard. In a letter to D’Alembert, this thinker opposed opening a theater in his hometown. This thinker said that “the first man to fence in land” and to find people “simple enough to believe it was his” was the (\*) “real founder of civil society” in his *Discourse on the Origins of Inequality*, which links property to the title phenomenon. This thinker states that “Man is born free, and everywhere he is in chains” in his most famous work. For 10 points, name this Swiss-French thinker who wrote *The Social Contract*.**

ANSWER: Jean-Jacques **Rousseau**

<Philosophy, Peela> [Ed. Golfinos]

With cellist Kyoko Ito, this pianist founded a festival called her “Meeting Point,” which is hosted in Beppu, Japan. For 10 points each:

[H] Name this Argentine pianist. She stated “I have a thing for octaves” in a 1972 interview, referencing her fast performances of Tchaikovsky’s first piano concerto.

ANSWER: Martha **Argerich**

[M] One of Argerich’s best-known recordings is of this composer’s third piano concerto in C major. This composer also wrote the *Lieutenant Kije* [KEE-jay] suite and the *Classical Symphony*.

ANSWER: Sergei **Prokofiev**

[E] Argerich’s student Gabriela Montero is known for her skill in this mode of playing, where the musician spontaneously makes up the music as they play.

ANSWER: **improvisation** [accept word forms like **improvising**]

<Classical Music, Bowman> [Ed.]

4. **This band’s members alternate wearing suits and dresses while performing in a black and white music video parodying a 1960s variety show. One song by this band repeats “all in all is all we are” 22 times. A song by this band behind confesses, “I wish I could eat your cancer when you turn black” before crying out (\*) “Hey! Wait! I got a new complaint.” This band’s lead singer repeats the word “hello” and screams, “here we are now, entertain us” on a song from their album *Nevermind*. Kurt Cobain headed, for 10 points, what Seattle grunge band behind “Heart-Shaped Box” and “Smells Like Teen Spirit?”**

ANSWER: **Nirvana**

<Popular Music, Guo> [Ed. Gayden]

The main character of this novel reminisces about his unrequited love for Lilia and invents an evil twin brother named Ferrante. For 10 points each:

[H] Name this novel about Roberto della Griva, a shipwrecked nobleman who convinces himself that a nearby island is just on the other side of the International Date Line.

ANSWER: *The **Island of the Day Before***

[M] *The Island of the Day Before* was written by this Italian author who also depicted Simone Simonini forging *Protocols of the Elders of Zion* in *The Prague Cemetery*.

ANSWER: Umberto **Eco**

[E] Adso of Melk and William of Baskerville investigate murders at a monastery in an Eco novel titled for *The Name of* [this flower].

ANSWER: **rose** [accept *The Name of the **Rose***]

<European Literature, Joshi> [Ed.]

5. **One candidate in this election campaigned in North Carolina under the “People’s Ticket.” This was the first election during which a candidate’s supporters sang “The Hunters of Kentucky.” During this election, William Crawford was eliminated in a contingent election. The fallout from this election marked the end of the (\*) “Era of Good Feelings” since no candidate received a majority of the electoral votes. Henry Clay became Secretary of State after a so-called “corrupt bargain” during this election. For 10 points, name this presidential election in which Andrew Jackson was defeated by John Quincy Adams.**

ANSWER: (United States Presidential) Election of **1824** [prompt on Election of ‘24]

<US History, Gayden> [Ed.]

The Tully-Fisher relation compares the luminosities and emission line widths of these objects. For 10 points each:

[E] Name these large collections of stars that include the Milky Way.

ANSWER: (spiral) **galaxies** [or spiral **galaxy**]

[H] C. C. Lin and Frank Shu proposed these phenomena to resolve the winding problem concerning the arms of spiral galaxies. Disturbances called propellers drive these phenomena in Saturn’s rings.

ANSWER: **density waves** [accept **density wave** theory; prompt on **DWT**]

[M] The density waves of spiral galaxies are driven by a type of this effect named for Bertil Lindblad. In another type of this effect, the orbital periods of objects are a ratio of integers, such as with Jupiter’s moons.

ANSWER: **resonance** [accept Lindblad **resonance** or orbital **resonance**]

<Astronomy, Melkumian> [Ed.]

6. **This politician’s chief of staff Tina Flournoy was criticized for creating a hostile work environment. This politician was succeeded in one post after the Americans for Prosperity Foundation filed a suit to strike down a voter disclosure law. After a meeting with the Guatemalan president Alejandro Giammattei, this politician bluntly told potential migrants, “Do not come.” This politician served as (\*) Attorney General of California until 2017, when she became its junior senator. For 10 points, name this current vice president of the United States.**

ANSWER: Kamala (Devi) **Harris**

<Current Events, Wu> [Ed.]

This musical's central couple imagines "a cry that tells us love goes on and on, played on a solo saxophone" in the duet "Last Night of the World." For 10 points each:

[M] Name this musical set in Vietnam about the ill-fated romance between the Marine Chris and bargirl Kim, written by Claude-Michel Schönberg.

ANSWER: Miss Saigon

[H] This Filipina actress played Kim in both the Original Broadway and London productions of *Miss Saigon*. She also sang the roles of Jasmine and Mulan in the Disney movies.

ANSWER: Lea Salonga [accept Maria Lea Carmen Imutan Salonga]

[E] Lea Salonga also played Éponine in a production of this other Claude-Michel Schönberg musical. Marius is rescued from the sewers of Paris by this musical's protagonist Jean Valjean.

ANSWER: *Les* Misérables ["lay meez-err-ah-bluh"] [or Les Mis]

<Musicals, Gayden> [Ed.]

7. **This composer instructed a solo cello to ascend a two-octave arpeggio to open his orchestration of Carl Maria von Weber's *Invitation to the Dance*. This composer defined an instrument as "any sounding body used by a composer" in his *Treatise on Instrumentation*. A symphony by this composer was rejected by its dedicatee because of the long wait before the solo violist's entry over harp arpeggios. (\*) Lord Byron's *Childe Harold's Pilgrimage* inspired this composer's *Harold in Italy*. Another symphony by this composer uses an *idée fixe* [ee-day feex] to depict his love for the Irish actress Harriet Smithson. For 10 points, name this French composer of *Symphonie Fantastique*.**

ANSWER: Hector Berlioz

<Classical Music, Sun> [Ed.]

This character uses the pseudonym "Delia" to trick Sir Lucius O'Trigger into sending his love letters to her rather than to Lydia. For 10 points each:

[H] Name this character from *The Rivals*, whose name is the origin of a term for the mistaken use of an incorrect word in place of a word with a similar sound.

ANSWER: Mrs. Malaprop

[M] This Irish playwright, who created Mrs. Malaprop in *The Rivals*, also wrote the plays *The Critic* and *The School for Scandal*.

ANSWER: Richard (Brinsley) Sheridan

[E] *The Rivals* was first performed in a theatre in Covent Garden in London, which is also the opening setting of this George Bernard Shaw play about a bet regarding Eliza Doolittle's Cockney accent.

ANSWER: Pygmalion

<British Literature, Joshi> [Ed.]

8. **This quantity is found by measuring the coefficient of restitution in the Leeb rebound test. A 136-degree glass pyramid is used to measure a form of this quantity called the Vickers number. Devices that measure this quantity are called sclerometers [sklih-RAW-mih-turz]. Minerals must have a lower value of this quantity than a (\*) streak plate to produce a color. By one definition, this quantity represents the resistance a material offers when scratched. On a scale for this quantity, talc has a value of 1 and diamond has a value of 10. For 10 points, name this quantity measured on the Mohs scale.**

ANSWER: hardness [accept softness before "streak plate" is read; accept subtypes such as rebound hardness or indentation hardness; do NOT accept or prompt on "tough(ness)" or "stiff(ness)"]

<Chemistry, Wu> [Ed.]

One of these women was said to have caused geese to fall out of the sky while another, Xi Shi [see-sure] caused fishes to stop swimming. For 10 points each:

[H] Name these women, who seduced emperors and other powerful men, causing the fall of some Chinese dynasties in the process.

ANSWER: the **Four Beauties** [or **Four Great Beauties**; accept **sì dà měi nǚ**; prompt on Empresses of China]

[M] One of the Four Beauties, Yang Guifei [yong gway-fay], was blamed for causing this rebellion by taking the attention of Emperor Xuanzong. This rebellion was led by a namesake Sogdian general during the Tang Dynasty.

ANSWER: **An Lushan** Rebellion [accept **An-Shi** Rebellion; accept equivalents in place of “rebellion”]

[E] Another of the four beauties, Wang Zhaojun [wong jao-jun], was sent by this dynasty to marry the leader of the Xiongnu nomads. This dynasty shares its name with China’s largest ethnic group.

ANSWER: **Han** Dynasty [or **Hàn** Cháo]

<World History, Li> [Ed. Gayden]

9. **In a story by this author, a stolen silver teaspoon and a gambler’s handkerchief are placed into a town’s donation hat. A prostitute named “The Duchess” befriends Piney Woods in another story by this author. While traveling to Sandy Bar, one of this author’s recurring characters meets a man known as “The Innocent,” Tom Simson. (\*)** Kentuck drowns while trying to save Cherokee Sal’s son from a mining camp flood in one story by this author. This author wrote about John Oakhurst’s suicide in a snowstorm. For 10 points, name this author of “The Luck of Roaring Camp” and “The Outcasts of Poker Flat.”

ANSWER: Bret **Harte** [accept Francis Brett **Hart**]

<US Literature, Melkumian> [Ed. Gayden]

At the beginning of this event, some people sing a song that begins, “A woman of valor, who can find?” For 10 points each:

[M] Name this weekly religious observance, for which some participants pre-cook food using programmed timers to avoid having to use electricity.

ANSWER: **Shabbat** [or **Sabbath** or **Shabbos**]

[H] Shabbat symbolically ends with this ceremony, which involves lighting a candle, blessing a cup of wine, and smelling sweet spices.

ANSWER: **Havdalah**

[E] The Shabbat tradition comes from the fact that God rested on the seventh day in this week-long process that is recounted in Genesis 1. Adam appeared on the sixth day of this process.

ANSWER: **creation** of the world [accept word forms like **creating** the world]

<Religion, Suh> [Ed.]

10. **This kingdom’s persecution of Catholics led to French intervention during the Tromelin Affair. Walter Gibson tried to establish a Mormon colony in this kingdom. A property qualification for voting in this kingdom was created by an 1887 document drafted by the Committee of Safety led by Lorrin Thurston. The overthrow of this kingdom’s last monarch was found to be unconstitutional in the (\*)** Blount Report. Sanford Dole served as president of this kingdom until its 1898 annexation by the United States. For 10 points, name this kingdom ruled by Queen Liliuokalani that became the 50th state in 1959.

ANSWER: Kingdom of **Hawai’i** [accept **Hawaiian** Kingdom]

<Mixed/Other History, Gayden> [Ed.]

Answer the following about substitute teachers in TV comedy. For 10 points each:

[H] In one episode from this TV series, students paint butter on the floor in a failed prank on their substitute teacher Holly Holliday. This show is mostly set at William McKinley High School.

ANSWER: Glee

[M] Dewey Finn becomes a substitute teacher after being kicked out of his rock band in this 2003 movie.

ANSWER: The School of Rock

[E] The substitute teacher Mr. Garvey mispronounces a student's name as "A-A-Ron" in a sketch by this comedy duo. The second member of this duo directed the movies *Us* and *Get Out*.

ANSWER: Key & Peele [accept Keegan-Michael Key and Jordan Peele; prompt on partial answers]

<Popular Culture, Chae> [Ed. Gayden]

11. **Some of these things produce pore-forming enzymes called holins [HOLE-inz], which allow lysins [LYE-sinz] to digest the cell wall. One of these things uses its knob-shaped peplomers [PEP-loh-mers] to bind to ACE2 [ace-two]. Another of these things can bind to CCR5 using gp41 [G-P-forty-one], and is targeted by a thymidine [THYE-mih-deen] derivative that inhibits (\*) reverse transcriptase. "T4" belongs to a group of these things that undergoes lytic [LIH-tick] cycles. One of these things produces spike proteins, the subject of a new mRNA-based technology. For 10 points, name these non-living pathogens that cause diseases like COVID.**

ANSWER: viruses [accept phages or bacteriophages; accept coronaviruses or retroviruses]

<Biology, Melkumian> [Ed. Yin]

In 2003, Democrats performed this action in order to stop a redistricting plan in Texas. For 10 points each:

[H] What action was again taken by Texas Democrats in July 2021 to prevent the passage of a bill restricting voting rights? *A description is acceptable.*

ANSWER: they left the state and flew to D.C. to prevent a vote from happening [accept equivalents like fleeing to Washington; prompt on answers that mention not showing up or being absent with "where did they go?"]

[M] The voting bill would have, among other things, prevented these people from being removed for their first election law violation. Observation from these people fed Donald Trump's lies about voter fraud.

ANSWER: poll watchers [accept scrutineers or challengers]

[E] Another bill Democrats didn't want passed was one preventing people charged with violent crimes from leaving jail in this way. In 2019, New York eliminated the cash payment needed to leave jail in this way.

ANSWER: bail [or bond; accept cash bail or bail bond]

<US Current Events, Chapman> [Ed.]

12. **In a film by this director, one character is locked out of his home after wearing the wrong raincoat. This director pioneered the style of "pure cinema." This director used a casaba melon and chocolate syrup for special effects in a scene in which piercing violin notes punctuate the perspective shifting across either end of a (\*) curtain. Every camera angle in one film by this director is at eye-level with a disabled photographer. Marion Crane is murdered in a shower while staying at the Bates Motel in a movie by this director. For 10 points, name this "master of suspense" who directed murder mysteries like *Rear Window* and *Psycho*.**

ANSWER: Alfred Hitchcock

<Film, Gayden> [Ed.]

This poem asserts “for there is always light, if only we’re brave enough to see it.” For 10 points each:

[H] Name this poem, which announces with “every breath” from the speaker’s “bronze-pounded chest” that “we will raise this wounded world into a wondrous one.”

ANSWER: “The **Hill We Climb**”

[M] This National Youth Poet Laureate recited “The Hill We Climb” at Joe Biden’s presidential inauguration.

ANSWER: Amanda **Gorman**

[E] In 1993 this other poet recited her poem “On the Pulse of the Morning” at Bill Clinton’s inauguration. She wrote an autobiography titled *I Know Why the Caged Bird Sings*.

ANSWER: Maya **Angelou**

<U.S. Literature, Joshi> [Ed. Gayden]

13. **This author wrote about an unsuccessful guitarist who flees London and a cellist who cannot play his instrument in stories collected in *Nocturnes*. A group of characters in a novel by this author travel to Norfolk to search for lost items like a music tape. The protagonist of another novel by this author listens to *Twice a Week or More* to improve his “bantering” skills and secretly loves Miss (\*) Kenton. That protagonist later visits Mrs. Benn after leaving Darlington Hall. A novel by this author centers on the carer Kathy, who looks after the donors Tommy and Ruth. For 10 points, name this author of *The Remains of the Day* and *Never Let Me Go*.**

ANSWER: (Sir) Kazuo **Ishiguro**

<British Literature, Melkumian> [Ed.]

One member of this group, Melba Beals, published the book *Warriors Don’t Cry* about her experiences attending Central High School. For 10 points each:

[M] Name this group of African American students who attempted to transfer to an all-white high school in 1957 accompanied by the 101st Airborne Division.

ANSWER: **Little Rock Nine**

[E] The desegregation of schools, such as Little Rock Central High School, was urged to proceed “with all deliberate speed” by this 1954 Supreme Court case, which overturned *Plessy v. Ferguson*.

ANSWER: ***Brown v. Board of Education (of Topeka)***

[H] Following the ruling in *Brown v. Board*, segregationists defiantly created this document that claimed neither the Constitution nor the 14th Amendment mentioned education. Georgia senator Richard Russell wrote its final version.

ANSWER: ***Southern Manifesto*** [or ***Declaration of Constitutional Principles***]

<US History, Nageswaran> [Ed.]

14. [NOTE TO MODERATOR: Please review answerline carefully before reading]

**The red-roofed city of Kotor is a popular cruise destination on this body of water. Gold, silver, bronze, and iron name the gates of a palace in ancient Salona on this body of water. The port of Rijeka lies on this body of water’s Istrian Peninsula. The Strait of (\*) Otranto separates this sea from the Ionian Sea, while its northern end is at the Gulf of Trieste. Split and Dubrovnik lie on this sea’s northern coast, in Dalmatia. Montenegro and Croatia lie on, for 10 points, what arm of the Mediterranean that divides Italy from the Balkan Peninsula?**

ANSWER: **Adriatic** Sea [accept *Mare Adriaticum* or *Mare Superum*; prompt on **Mediterranean** Sea with “be more specific”; do NOT accept or prompt on “Ionian (Sea)” or “Aegean (Sea)” or other branches of the Mediterranean]

<Geography, Gayden> [Ed.]

This effect has the same underlying physical mechanism as the Peltier [PEL-tee-yay] effect. For 10 points each:  
[H] Name this effect where a voltage gradient is created from a temperature difference. This effect is used by thermocouples to generate electricity.

ANSWER: **Seebeck** effect [prompt on thermoelectric effect]

[M] Devices using the Seebeck effect contain semiconductors that have undergone this process, which introduces impurities to change the semiconductor's electrical properties. This process has p- and n-types.

ANSWER: **doping** [accept word forms such as **doped**]

[E] Thermocouples using the Seebeck effect can act as these devices. Early forms of these temperature-measuring devices were based on the height of mercury in a glass tube.

ANSWER: **thermometers**

<Physics, Wu> [Ed.]

15. **At the beginning of this event, protesters read a 16 point manifesto beneath a statue of Jozef Bem. During this event, the AVH fired on protesters outside of a radio station. Cardinal Jozsef Mindszenty was freed from prison during this event. Tensions from this event led to Ervin Zador being punched in the face in the so-called (\*) "Blood in the Water" water polo match. Janos Kadar implemented "Goulash Communism" after replacing this event's leader, Imre Nagy. For 10 points, name this uprising in a central European country which ended with the Soviet invasion of Budapest.**

ANSWER: **Hungarian Revolution** of 1956 [accept equivalents such as **Hungarian Uprising** or **Hungarian Rebellion**]  
<European History, Guo and Hartung> [Ed.]

An unfinished monkey cowers behind a "Dying" one of these people in a 16th century sculpture. For 10 points each:  
[M] Name this type of person. A "rebellious" one of them was sculpted for the tomb of Pope Julius II.

ANSWER: **slaves**

[E] This Renaissance artist sculpted slaves for Pope Julius II's tomb. Before his death, Pope Julius commissioned this artist to paint the ceiling of the Sistine Chapel.

ANSWER: **Michelangelo Buonarroti** [accept either underlined portion]

[H] Cleomenes' *Venus de' Medici* inspired this American neoclassical sculptor's marble statue of a female Greek slave chained to a post. Hellenistic sculptures of dying slaves influenced both Michaelangelo and this sculptor.

ANSWER: Hiram **Powers**

<Painting and Sculpture, Guo> [Ed. Gayden]

16. **While attending the wedding of Cadmus and Harmonia, this deity's lover was struck with lightning by Zeus. This deity cursed Erysichthon with insatiable hunger after he ordered a sacred grove of trees dedicated to this deity be cut down. It's not Isis, but this deity unsuccessfully tried to repay hospitality by making her host's (\*) sons immortal. Triptolemus learned from this goddess, who is the older of the two deities who were honored in the Eleusinian Mysteries. This goddess absentmindedly caused a famine and ate Pelops's shoulder while looking for her daughter who was kidnapped by Hades. For 10 points, name this Greek goddess of agriculture, the mother of Persephone** [pur-SEH-fuh-nee].

ANSWER: **Demeter** [or **Deo** or **Sito** or **Thesmophoros**; accept **Doso**; do NOT accept or prompt on "Ceres"]  
<Mythology, Suh> [Ed. Suh]



Answer the following about green chemistry, which aims to minimize hazardous waste. For 10 points each:

[M] A common solvent in green chemistry is the supercritical phase of this compound, which is commonly used to extract caffeine from coffee.

ANSWER: **carbon dioxide** [or **CO<sub>2</sub>**]

[E] Some green chemistry reactions form bonds through the auto-transfer, or “borrowing,” of this element. In fuel cells, this element combines with oxygen to form water.

ANSWER: **hydrogen** [or **H**]

[H] This compound is produced by the peroxide process, a green substitute for the more common Olin Raschig process. This powerful reducing agent, often used in rocket fuel, has the formula N<sub>2</sub>H<sub>4</sub>.

ANSWER: **hydrazine** [HIGH-druh-zeen]

<Chemistry, Melkumian> [Ed. Yin]

17. **This city was built under the astrological sign of Leo. The powerful Barmakid family established a paper mill in this city. Two brothers from this city illustrated self-trimming lamps and fountains in the *Book of Ingenious Devices*. The final ruler of a dynasty based in this city was (\*) rolled up into a carpet and trampled to death. This city’s central river ran black with ink after the books from its House of Wisdom were thrown into it during Hulagu Khan’s sack of this city. The Abbasid Caliphate was based in, for 10 points, what Iraqi capital?**

ANSWER: **Baghdad**

<World History, Pavlou> [Ed.]

To the east of this region is the Drakensberg, a particularly picturesque and steep portion of the Great Escarpment. For 10 points each:

[H] Name this dry inland plateau of generally flat, unfertile plains, northeast of the Great Karoo. This region is heavily populated despite its environmental hostility due to underground gold deposits.

ANSWER: **highveld** [prompt on **veld**]

[E] The highveld is located in this country. This country’s population was originally centered around Cape Town, but its largest cities today are on the highveld due to the aftermath of the Witwatersrand gold rush.

ANSWER: **South Africa** [or Republic of **South Africa**; accept **RSA**]

[M] The highveld is in the drainage basin of this river, the longest in South Africa. Its hydroelectric dams, including the Gariiep Dam, are critical to the power supply of the region.

ANSWER: **Orange** River

<Geography, Ma> [Ed.]

18. **This poet wrote of a man who “climbs to the mountains of Primal Pain” in one poem. The title object of a poem by this writer has a “dark center where procreation flared.” This poet described an inscription on the “tablet in Santa Maria Formosa” in a poem that asks if the addressee has “remembered (\*) Gaspara Stampa.” The next poem in that collection by this poet begins, “Every angel is terror.” This poet wrote “You must change your life” in “Archaic Torso of Apollo.” For ten points, name this German poet who asked “Who, if I cried out, would hear me among the angelic orders?” in his *Duino Elegies*.**

ANSWER: Rainer Maria **Rilke** [RILL-kuh] [or René Karl Wilhelm Johann Josef Maria **Rilke**]

<European Literature, Joshi> [Ed.]

A character enters one of these places using the password “pine fresh” in order to “mull things over,” where he learns that “an hour long [he’ll] have to look” for “what he’ll sorely miss.” For 10 points each:

[H] Name these places, another of which contains an interactive serpentine engraving that can be told to “open up.”

ANSWER: **bathrooms** in Hogwarts [accept Prefects’ **Bathroom** or second-floor **bathroom**; accept **lavatory** or equivalents in place of “bathroom”; accept, but do NOT otherwise reveal, Moaning Myrtle’s **Bathroom**]

[M] This depressed ghost haunts a stall in the second-floor bathroom. She rejoices in the memory of her death at the hands of the basilisk while hiding in a stall near the entrance to the Chamber of Secrets.

ANSWER: Moaning **Myrtle**

[E] The Chamber of Secrets can only be opened by the heir of this Hogwarts founder. He names the house to which Voldemort and Severus Snape belonged.

ANSWER: **Salazar Slytherin** [accept either underlined portion; accept **Slytherin** House]

<Mixed/Other Literature, Gayden> [Ed.]

19. **A white fence extends towards a flagpole in an Edvard Munch work inspired by this painting. A complement to this painting intended by its artist to go beyond “photographic and silly perfection” depicts a grove of olive trees under blue peaks. Yellow gas lights glimmer on the surface of the title river in a version of this painting set “over the (\*) Rhone.”** Blue rolling hills dominate the background of this painting, in which a large cypress tree partly obscures the town of Saint-Remy. The upper half of this painting depicts a yellow crescent moon in the swirling blue evening sky. For 10 points, name this magnum opus of Vincent Van Gogh.

ANSWER: *The **Starry Night*** [accept *La **nuit étoilée***]

<Painting, Gayden> [Ed.]

This country’s Fort Ancient Culture built the world’s largest snake effigy. For 10 points each:

[E] Name this country home to the mound-building Mississippian culture. The Pueblo people lived in this country’s southwest.

ANSWER: **United States** of **America** [accept either underlined portion; accept **U.S.A.**]

[M] This Mississippian city contains a burial for a man surrounded by beads in the shape of a falcon, as well as Monk’s Mound. This is the only known Pre-Columbian city north of Mexico.

ANSWER: **Cahokia**

[H] Cahokia was likely the origin of this Mississippian game. This game involves rolling stones and then throwing spears to land the spears as close to the stones as possible.

ANSWER: **chunky** [accept **chenco**; accept **tchung-kee**; accept the **hoop and stick** game]

<Ancient History, Gayden> [Ed. Nageswaran]

20. **A theorem named for a “uniform” type of this operation does not necessarily hold true for a set of pointwise convergent functions. Convergence is equivalent to the inferior and superior forms of this operation being equal. Taking this operation on two distinct functions can be used to find its value for a third by the (\*) squeeze theorem.** When computing this operation, indeterminate forms may be resolved by taking derivatives by L’Hopital’s rule. A function is continuous at a point if this operation from the left and right are both equal to the value of the function at that point. For ten points, name this operation that finds the value that a function approaches.

ANSWER: **limit** [accept uniform **limit**]

<Math, Bajji> [Ed. Liu]

Firms can generate head-start profits by implementing a new strategy in this market structure. For 10 points each:  
[M] Name these markets that have a relatively few number of firms.

ANSWER: **oligopoly** [AH-lib-GAH-puh-lee] [accept **duopoly**; as the situations tend to be modeled similarly]

[H] Firms make identical goods but compete in price in this model of duopolies and oligopolies, which leads to a Nash equilibrium at the competitive price. It is often contrasted with the Cournot and Stackelberg models.

ANSWER: **Bertrand** model [or **Bertrand** competition]

[E] Oligopolies have a kinked type of this curve, which represents the amount of a good consumers are willing to buy at a given price. When this curve intersects the supply curve, the market is in equilibrium.

ANSWER: **demand** curve [accept kinked **demand** curve]

<Social Science, Wu> [Ed.]