

James Blair Bowl Packet 2

Buzzer Question: “*what is your favorite movie or movie franchise?*”

1. The Scholarship Board employs the grandson of this character, who also falls in love with the *osu* Clara. This son of an infamously lazy flute player defeated a man known as “the Cat” in a wrestling match and is warned by Ezeudu not to participate in a certain ritual. Another of this man’s sons adopts the name “Isaac” after converting to Christianity, which results in a beating from this character. This character’s gun explodes during a funeral, resulting in a seven-year exile during which time he learns that English colonizers have occupied his village of Umofia. For ten points, name this Igbo warrior, the principle character of Chinua Achebe’s *Things Fall Apart*.

Answer: **Okonkwo**

2. In the first episode of this series, a cook is murdered by a gunshot to the head, but his death is staged as a suicide. In a later episode, one of the main characters suggests a way to find a gate with compasses. Steve breaks Jonathan’s camera, and another of the main characters really likes Eggo waffles. The beginning of this series starts with Michael, Dustin, Luke, and Will battling a Demogorgon in D&D. For 10 points, name this Netflix original series where Will goes missing and Eleven must travel to the Upside Down to save Will and Barb.

Answer: **Stranger Things**

3. Weddings in this religion involve the presentation of a red scarf to the bride and groom, who do not interact during the ceremony. Members of this religion are expected to volunteer in langars, or communal kitchens. This religion places emphasis on simran, or self-reflection, used to repel the Five Thieves. During initiation, a khanda stirs the holy water amrit and adherents wear a ceremonial dagger called the kirpan to be inducted into the Khalsa. The Golden Temple is the holiest place of this religion, of which kesh and kanga are part of the 5 Ks. Its main scripture is the Adi Granth. For ten points, name this religion founded in Punjab by Guru Nanak.

Answer: **Sikhism**

4. While in Ireland this individual met with Daniel O’Connell, who provided a great influence to his philosophy. This man discussed a fight with Edward Corvey and described how he learned to read from sailors in one work. He was the chosen vice presidential running mate of Victoria Woodhull and he famously founded the North Star newspaper. This individual was the only African-American to attend the Seneca Falls convention. For ten points, name this abolitionist, journalist, and author of a narrative describing his life as a slave.

Answer: Frederick **Douglass**

5. Jacob Bekenstein and Stephen Hawking proposed that within objects of a similar size, black holes have the maximum value of this entity. Helium is the only element to have a negative value of this when undergoing fusion. That equation relates enthalpy divided by melting point to find this value for fusion. Rudolf Clausius posited this entity when studying heat and isothermal processes in the Carnot cycle, discovering that this was a state function. It measures the amount of energy that cannot be used for work and the third law of thermodynamics claims that for a perfect crystal at absolute zero this value equals zero. Denoted S, for ten points, name this concept measuring disorder.

Answer: **entropy**

6. This man wrote a collection of short stories set in the town of Swansea whose title parodies a James Joyce novel, "Portrait of the Artist as a Young Dog." This man wrote the radio play "of voices", "Under Milk Wood," in which the narrator, Captain Cat, begins the story by dreaming of lost men. This poet has a narrator claim in "Altarwise by Owllight" that he is the "world's largest gentleman" and that he "shares [his] bed with Capricorn and Cancer," while in "Fern Hill," his narrator states that "time has held [him] near and dying." His most famous work, however, is a villanelle written for his dying father. For ten points, name this Welsh Poet who wrote "Do not Go Gently into that Good Night."

Answer: Dylan **Thomas**

7. An object relations theory-based mechanism for these entities was proposed by Otto F. Kernberg, while George Vaillant's four-level classification of them led to their inclusion in the DSM-IV. One example of these entities involves the physical manifestation of illness given an external mental stressor and is known as Somatization. Two classic examples of these entities include projection and the healthier sublimation. Thought to be created by an individual's ego when faced with anxiety, these are, For ten points, what phenomenon, often defined as unconscious mechanisms in the mind that reduce psychological stress.

Answer: **defense mechanisms**

8. When Dingane became leader of this nation, he executed all members of the royal family. After one conflict, this nation was absorbed into the Natal colony. Warriors of this nation utilized a type of spear known as an assegai and one of their leaders created the famous "buffalo horn" battle formation. This nation fought a war against Voortrekkers led by Andries Pretorius. Under the leadership of Cetshawayo, these people managed to win at the Battle of Isandlwana. For ten points, name this kingdom from modern-day South Africa, famously led by a king known as Shaka.

Answer: **Zulu** Kingdom

9. An "invisible worm/that flies in the night/in the howling storm" is said to induce the titular illness in a William Blake poem about a "sick" one of these objects. The eponymous speaker of Christopher Marlowe's "The Passionate Shepherd to His Love" tell the addressee that he will fashion a bed out of these flowers. Another work claims that one of these flowers "tomorrow will be dying" while yet another work describes one of these objects as "newly sprung in June". During one monologue Juliet states that one of these flowers "by any other name would smell as sweet". For ten points name these flowers, a "red, red" one of which was discussed by Robert Burns.

Answer: **rose** (prompt of "flowers" prior to "flowers" being read)

10. The MSW effect predicts oscillations in these entities, and studies suggest that there is no self-interaction among them. It is believed that they can exist as their own antiparticles, which can be emitted during beta decay. They were first detected in an experiment by Cowan and Reines, and the T2K experiment demonstrated that this particle can oscillate while traveling across a medium, which is easy due to its neutral charge. First proposed by Wolfgang Pauli when trying to calculate for conservation of energy these are, for ten points, what fast moving particles, which come in flavors of electron, muon, and tau?

Answer: **neutrino**

11. This group was able to survive because of their visits with the Gargarean tribe, and one of their leaders, Thalestris, was said to have been a close ally of Alexander the Great. Bellerophon fought with some of these figures during his time in Lycia, though they are perhaps better known for their conflict with the Phrygians. King Priam enlisted several of them during the Trojan War and a man named Thestris mocked Achilles after he killed their leader, Penthisileia. The most famous member of this group bore a son to Theseus and had her girdle stolen by Hercules. For ten points, name these people, led by Queen Hippolyta, a race of fearsome warrior women from Greek mythology.

Answer: Amazons

12. This artist also painted multiple versions of olive groves which are thought to symbolize his feelings towards his rival's "Christ in Gethsemane". He depicted a physician holding a foxglove plant in his "Portrait of Dr. Gachet". This artist depicts multiple "Willows at Sunset" while another tree appears in the right side of this artist's "Cafe Terrace at Night." All three copies of his "Bedroom at Arles" depict a tree inside a painting hanging on the wall. FTP, name this artist, who depicts a cypress tree towering over a church underneath Venus and swirling stars in "Starry Night".

Answer: Vincent Van Gogh

13. After the Balangiga Massacre, General Jacob Smith ordered his troops to kill everyone over the age of ten on the island of Samar [emphasize the first syllable] in this country. The Jones Act provided the first elected government in this country. During this country's struggle for independence, Jose Rizal [Ree-S AHL] was executed and the Katipunan acted in secret until being discovered. American occupation of this modern nation was opposed by the rebel Emilio Aguinaldo. For ten points, name this southeast Asian island country to which General MacArthur vowed to return.

Answer: the Philippines

14. One scene in this series of works features a "sugaring off" in which several characters collect tree sap. The author of this series wrote from her home in Missouri and had her daughter, Rose Lane edit them. The final book in this series was printed posthumously and detailed the first four years of the author's marriage. A recurring antagonist in this series, Nellie Olson, called the author and her sister "country girls" upon their first meeting. For ten points, Farmer Boy, The First Four Years, and On the Banks of Plum Creek are books in this series, a fictionalized account of life in the Midwest during the 1870's by Laura Ingalls Wilder.

Answer: Little House on the Prairie

15. Just like a similar language it supports static, thread, automatic, and dynamic storage duration objects. Alexander Stepanov created the Standard Template Library for this language, and issues such as a lack of garbage collection and feature creep have been the subject of criticism by Linus Torvalds. The Rule of 3 applies to this language's destructors and assignment operators. Polymorphisms are implemented using "name mangling" and it was originally developed by Bjarne Stroustrup. For ten points name this object-oriented programming language which, as its name would suggest, adapts an earlier procedural language with a single letter name.

Answer: C++ (accept C until "Alexander Stepanov", after that do not accept or prompt on "C")

16. This country is host to a Russian naval base at Tartus. Though it mainly exports oil, this nation also extracts Natural Gas from the field of Jbessa. Historically its southern region of

Hawran has been an agricultural area and its northeastern portion has been predominately populated by Kurmanji Kurds. This country is the site of the ancient city of Palmyra. That city is in the governorate of Homs, and other governorates in this country include Deir ez-Zor, Raqqa, and Aleppo. For ten points, name this country wracked by civil war since 2011 with its capital at Damascus.

Answer: **Syria**

17. Guillaume de Machaut wrote an earlier type of this composition named for “Notre Dame”. Mozart died before completing his “Great” one of these in C minor, while Bach is famous for one in B minor. “Nelson” “Theresa” and “In Time of War” are three Haydn compositions of this type. An ordinary one of these starts off with a Kyrie and ends with a section with two sets of repeating elements. Many baroque and classical composers wrote requiems- a version of this kind of musical composition but for funerals. FTP, name this type of composition that is set to portions of a Catholic liturgy.

Answer: **mass**

18. A special review board headed by John Tower led the investigation on a certain person’s involvement in this event. After this event, Lawrence E. Walsh brought legal proceedings against Caspar Weinberger who had recently resigned his position as Secretary of Defense. This event violated the Boland Amendment and it saw Oliver North divert proceeds from arms sales to one participant. For 10 points, name this 1980’s scandal involving the Reagan administration selling a Middle Eastern country arms and giving the money to a rebel group in Nicaragua.

Answer: **Iran-Contra** Affair

19. A deformity in this organ is called the Phrygian cap due to the shape an extra fold of tissue in the fundus causes. Cancer of this structure often leads to the calcification of its walls, which is known as its “porcelain” form. Another infection in this organ causes the blockage of the cystic duct and subsequent inflammation of Hartmann’s pouch. Dyskinesia affects this organ’s sphincter of Oddi. Typically green in appearance, this organ is removed in a cholecystectomy when high cholesterol causes its namesake stones. For ten points, name this organ beneath the liver that stores and secretes bile.

Answer: **gallbladder**

20. In one of this man’s works, this man argued that, since policies rely on predictions of consequences, normative economics is not independent of positive economics. Besides writing “The Methodology of Positive Economics,” this economist trained Chilean economists who worked in Augusto Pinochet’s government, and he later attributed Chile’s success to his ideas. This member of the Chicago school argued that economic freedom is essential for political freedom. A strong proponent of monetarism this is, for ten points, what American economist who wrote *Capitalism and Freedom*?

Answer: Milton **Friedman**

21. A character in this story was once hurled against a tree by a Cape buffalo and knew the protagonist from his article about hunting snow leopards. The protagonist is caught in Death Swamp after making a Malay man catcher and a dog dies after falling into a Burmese tiger pit. The protagonist is separated from Whitney when he drops his pipe and falls into the sea, ending up on Ship-Trap Island at the beginning of this work. For ten points, Rainsford must compete against General Zaroff for his life in what Richard Connell story?

Answer: “The **Most Dangerous Game**”

22. In the Chinese model of these entities, the “onset” cluster of these entities is replaced with the “initial”. The suprasegmental properties of these entities include stress, tone, and accent. Hierarchical models of these entities have them branch off into “coda” and “body” classifications. A heavy one of these entities typically possess a branching rime and they are chiefly composed of a nucleus, and two or more margins. In some methods of designation they are linked by a tie bar and they are separated by periods in IPA. For ten points each, name these prosodic units of language, two of which are found in the word “water” and three of which are found in the word “concentrate.”

Answer: **syllable**

Bonuses

1. In his work *The Elementary Structure of Kinship* this man differentiated between “engineers” and “bricoleurs”. For ten points each-
 - a. Name this French structural anthropologist known for his *Mythologiques* and his book *The Savage Mind*.
Answer: Claude **Levi-Strauss**
 - b. Claude Levi-Strauss likewise wrote frequently about this religious system which he believed was meaningless. Levi-Strauss believed that this system of belief preceded traditional animism and it was discussed along with taboo in a work by Sigmund Freud.
Answer: **totemism**
 - c. Levi-Strauss’ first book in his *Mythologiques* is this work which details his idea of binary opposition as a means of reconstructing culture. The title refers to one such pair of opposites that commonly defines Amerindian cuisine.
Answer: *The* **Raw and the Cooked**
2. Each point in a system of this type is dependent on initial conditions. For ten points each:
 - a. Name this principle in which dynamic systems exhibit deterministic and unpredictable behavior, but not random.
Answer: **chaos theory** [accept **chaotic motion**]
 - b. The father of chaos theory, this man summarized it as “When the present determines the future, but the approximate present does not determine the approximate future.” He names a system of chaotic motion whose plots are usually in the shape of a butterfly or figure eight.
Answer: Edward **Lorenz**
 - c. One example of a chaotic dynamical system is a double one of these objects, a simple one of which undergoes harmonic oscillation.
Answer: double **pendulum**
3. Europe has been the target of numerous terrorist attacks over the last twenty years. For ten points each-
 - a. In January 2015, terrorists attacked the offices of political satirist Charlie Hebdo in this European capital.

Answer: **Paris**

- b. In 2005, subway trains in this city were bombed by al-Qaeda sympathizers led by Mohammed Sidique Khan. Another bombing was attempted two weeks after but both detonators failed.

Answer: **London**

- c. Three days before a 2004 general election, this city saw several commuter trains bombed in what would become the deadliest European terrorist bombing since the Lockerbie attacks. Many believe that the Partido Popular party lost the election due in part of their handling of the attack.

Answer: **Madrid**

- 4. Many writers use human anatomy as complex metaphors. For ten points each, answer some questions about human body parts in literature.

- a. This satirical short story sees the titular feature accidentally removed from Major Kovalyov by his barber after which it begins impersonating Kovalyov around St. Petersburg.

Answer: **“The Nose”**

- b. Despite the efforts of some sylphs, the Baron perpetrates the titular action of this Alexander Pope story when he manages to steal some of Belinda’s hair.

Answer: *The **Rape of the Lock***

- c. In Edgar Allan Poe’s “The Tell Tale Heart”, the narrator describes his descent into madness because of one of these physical features belonging to his landlord, which he likens to that of a vulture.

Answer: **eye**

- 5. The original set for this work was designed by Japanese sculptor Isamu Noguchi and it contained a minimalist shack without walls. For ten points each-

- a. Name this ballet, which contains the movements “The Lord’s Day” as well as several variations on the Shaker Hymn “Simple Gifts”. It follows a Pennsylvania couple as they try to build a home in the mountains.

Answer: ***Appalachian Spring***

- b. Copland’s *Appalachian Spring* was originally composed for and choreographed by this woman, who pioneered a namesake technique focusing on the synchronization of breathing patterns as well as the “spiraling” of the torso.

Answer: Martha **Graham**

- c. The title of *Appalachian Spring* is taken from the poem “The Bridge”, a work by this American writer. Drawing on inspiration from the works of T.S. Eliot this man also wrote the collection *White Buildings* and the poem “Powhatan’s Daughter”.

Answer: Harold **Hart Crane** (prompt on “Crane”)

- 6. The Book of the Dead refers to this deity as ruling over the underworld. For ten points each:

- a. Often depicted with green skin, name this deity whom Set murdered in an attempt to usurp him as ruler of Egypt.

Answer: **Osiris**

- b. Osiris replaced this other underworld deity, who would take souls to be judged. He is depicted with the head of a jackal.

Answer: **Anubis**

- c. Hearts of the dead were weighed to determine if a soul could enter the underworld. If a soul was deemed unworthy they would be eaten by this creature. She is often depicted with the head of a crocodile, the front legs of a lion, and the back legs of a hippopotamus.

Answer: **Ammut** or **Ammit**

- 7. For ten points each, name the following states that were not among the original 13 colonies based on events that occurred within them during the Revolutionary War.

- a. During the war, this future state refused to send delegates to the Continental Congress. The city of Pensacola in this state was later captured by the Spanish, who received the future state as part of the Treaty of Paris

Answer: **Florida**

- b. Benedict Arnold's invasion of Quebec passed through this state, having been provided inaccurate maps and boats that leaked whilst traveling up the Kennebec River.

Answer: **Maine**

- c. In 1782, this state saw the Gnadenhutten Massacre, where troops of the Pennsylvania Militia killed 92 Christian Lenape after accusing them of sponsoring raids.

Answer: **Ohio**

- 8. Chaucer chose to ignore social rank and focus on characters in his *Canterbury Tales*. For ten points each:

- a. A knight finds many different answers when asking what women most desire in this tale, before realizing they want sovereignty over their husbands.

Answer: **Wife of Bath's** tale

- b. This tale is told after the Physician's Tale and describes three brothers who set out to kill Death.

Answer: **Pardoner's** Tale

- c. The prize in the storytelling contest among the characters is a free meal at this inn in Southwark, but Chaucer left the story incomplete, leaving no winner.

Answer: **Tabard** Inn

- 9. Beak trimming and the control of methionine exposure is one way to prevent this behavior amongst poultry. For ten points each-

- a. Name this form of predation, whose sexual form is commonly seen amongst female arthropods such as black widows and praying mantises.

Answer: **cannibalism** (accept obvious equivalents)

- b. Cannibalism is the most common means of transmitting the disease Kuru, a form of spongiform encephalopathy that is caused by one of these infectious agents. These misfolded proteins also cause Creutzfeldt-Jakob disease and Mad Cow Disease.

Answer: **prions**

- c. Transmission of this other prion disease usually occurs through exposure to contaminated waste or saliva. It is a close relative of "mad cow disease" and it usually effects sheep, where it gets its name from the fact that it induces severe itching.

Answer: **scrapie**

- 10. For ten points each, answer these three questions about locales in Virginia.

- a. This city in the Tidewater is the site of a large naval base, and is the second largest city in the Hampton Roads area.
Answer: **Norfolk** (NO-fuck or NAW-fuck)
 - b. A series of Confederate memorials dot a road in this city, which also includes a statue of hometown hero Arthur Ashe.
Answer: **Richmond**
 - c. The famous Barter Theater is located in this Virginia town just north of the Tennessee border. It is also the starting point of the Virginia Creeper Trail, which runs from this town to Whitetop.
Answer: **Abingdon**
11. Answer some questions regarding the Scandinavian invasion of Britain for ten points each:
- a. Name this island the Vikings raided in 793, also the name of an illuminated manuscript of gospels. It was the site of the first major Norse attack in the British Isles.
Answer: **Lindisfarne**
 - b. This is the polity that the settled Scandinavians ruled over, stretching from the borders of Northumberland and covering much of modern-day east England.
Answer: **Danelaw**
 - c. After the Danish king Harthacnut died, the throne was left to the Anglo-Saxon house of Wessex, which ended when this ruler died at the Battle of Hastings.
Answer: **Harold Godwinson** (prompt on partial)
12. For ten points each, answer these questions about graphic novels.
- a. This graphic novel by Marjane Satrapi details her childhood in Revolutionary Iran.
Answer: **Persepolis**
 - b. This graphic novel by Art Spiegelman tells the story of his father's experience in the Holocaust. It depicts Poles as pigs, Germans as cats, and Jews as the titular creatures.
Answer: **Maus**
 - c. This series by Alan Moore depicts a world of superheroes which allowed the United States to win in Vietnam and Richard Nixon to remain president. One of them is eventually undone by the plotting of Adrian Veidt.
Answer: **Watchmen**
13. One analogy against this concept focused on a cosmic teapot that supposedly orbited the Sun somewhere between Mars and Earth, and that analogy's developer, Bertrand Russell, claimed that he could not expect one to believe him even if his claim was unfalsifiable. For ten points each-
- a. That analogy served as an argument against this concept, which is also the subject of the notable "ontological argument".
Answer: **the existence of God** (accept obvious equivalents)
 - b. According to this apologetic argument, one should naturally defer to God's existence because one will only suffer a finite loss with the potential for infinite gains, while an individual who defers to atheism stands only to suffer finite loss or infinite loss.
Answer: **Pascal's Wager**
 - c. Perhaps one of the most famous arguments for God's existence comes from the scholastic philosopher Thomas Aquinas whose "five ways" disputation is concluded

by this other notable argument. It asserts that things without sentience are arranged toward purpose, which can only make sense if an intelligent being guides them in that direction.

Answer: **teleological** argument

14. Alfred Hitchcock based many of his movies on books. For ten points each:

- a. *D'entre les morts*, or From Among the Dead, was the basis for what movie in which Scottie is hindered by his fear of heights in investigating Madeline Elster's death?

Answer: **Vertigo**

- b. Based on a novel by Robert Bloch, Marion Crane is murdered at the Bates Motel in what film?

Answer: **Psycho**

- c. Patricia Highsmith wrote this film's original story in which Bruno kills Guy's wife under the mistaken belief that Guy would kill his father.

Answer: **Strangers on a Train**

15. He designed a series of stacked white prisms as the primary structure for the Museum of Islamic Art in Doha Qatar. For ten points each-

- a. Name this architect, who also notably designed the Rock and Roll Hall of Fame in Cleveland, Ohio and a large glass pyramid found outside the Louvre Museum in Paris.

Answer: I. M. **Pei**

- b. This city is sight of several Pei works, including the John F. Kennedy Library as well as the Government Center's primary ground plan. Another notable work from Pei's firm in this city is a reflective skyscraper with a history of faulty window panes known as the John Hancock Tower.

Answer: **Boston**

- c. Pei notably created a namesake "plan" for an urban redevelopment of this American State Capital. Pei helped design the Myriad Convention Center and Myriad Botanical Gardens for this city, but ultimately demolished its famous Criterion Theater. Another of his buildings here, the Alfred P. Murrah Federal Building, would later be destroyed in 1995.

Answer: **Oklahoma City**

16. The fractional form of this laboratory technique separates compounds with the help of a namesake column. For ten points each-

- a. Name this laboratory technique, in which substances are separated based on discriminatory vaporization and condensation.

Answer: **distillation**

- b. Distillation relies on the difference in the substances' boiling points, whose elevation is one of these properties. Other examples include the depression of freezing point and the lowering of vapor pressure.

Answer: **colligative** properties

- c. The vapor of these mixtures possesses the same ratio of constituents as their liquid forms and thus cannot be separated by simple distillation. Instead, new constituents

are added and the vapor pressure is altered in order to perform their namesake distillation.

Answer: **azeotrope**

17. For ten points each, answer these questions about post-1968 civil rights activism.

- a. This individual ran for the Democratic Presidential Nomination in 1984, and previously chaired the Southern Christian Leadership Conference.

Answer: Jesse **Jackson**

- b. Jackson drew criticism from the Jewish-American community after refusing to repudiate this individual for anti-Semitic comments, the leader of the Nation of Islam.

Answer: Louis **Farrakhan**

- c. Farrakhan was a key organizer and speaker at this 1995 event. It was held in Washington D.C. and it intended to fight negative stereotypes of African-American men.

Answer: **Million Man March**

18. Their word order is subject to Wackernagel's law and its fricatives shift according to Verner's Law. For ten points each-

- a. Name this group of Indo-European Languages that includes Faroese, Burgundian, and English.

Answer: **Germanic** languages

- b. According to this law, voiceless stops in Germanic languages are shifted to voiceless fricatives and voiced stops become voiceless stops. It was developed by a man who, with his Brother Wilhelm, famously catalogued various German folktales.

Answer: **Grimm's** Law

- c. This other Germanic language is the closest language to English still spoken in modern times. It is predominately spoken in Saterland, parts of lower Saxony, and North Holland.

Answer: **Frisian**

19. Hawthorne published these short stories before turning to novels. For ten points each:

- a. The titular character of this work becomes disillusioned with his Puritan village and his wife Faith after observing a witch's sabbath in the woods.

Answer: **Young Goodman Brown**

- b. In this other Hawthorne story Giovanni falls in love with the titular character who dies after he attempts to cure her poison.

Answer: **"Rappacinni's Daughter"**

- c. Hawthorne wrote a story about a "great" one of these gems. In one short story Sherlock Holmes finds a blue one inside a goose.

Answer: **carbuncle**

20. These mathematical constructs are often used to find the solutions to systems of equations, for ten points each:

- a. Name these rectangular arrays of numbers whose entries are often the coefficients of polynomials.

Answer: **Matrices**

- b. This branch of mathematics uses matrices to study vectors and vector spaces, as well as the namesake type of functions.

Answer: **Linear Algebra**

- c. This is the last name shared by a man who is the namesake of a canonical form of matrix and a mathematician who co-names a method of row reduction with Gauss.

Answer: **Jordan**

21. This military action was commanded by Hoang Van Thai and Vo Nguyen Giap. For ten points each:

- a. This military campaign was launched by North Vietnamese forces in early 1968 with the intention of forcing American withdrawal by hijacking media coverage to show the brutality of the war. It is named for a traditional Vietnamese holiday.

Answer: **Tet Offensive**

- b. This general was in command of the American forces in Vietnam during the Tet Offensive. He was succeeded by Creighton Abrams.

Answer: William **Westmoreland**

- c. The Tet Offensive was widely compared to this 1954 battle, where French forces were overwhelmed by forces of the Viet Minh. French defeat in this battle led to their withdrawal from Vietnam.

Answer: Battle of **Dien Bien Phu**

22. This Swiss mathematician was the most prolific in history, for ten points each:

- a. Name this mathematician who created the notation for modern trigonometric functions and is the namesake for the number e.

Answer: Leonard **Euler**

- b. Euler helped create graph theory when he solved this problem about traversing a certain city in Prussia.

Answer: **The Seven Bridges of Konigsberg**

- c. Euler's *Introduction to the Analysis of the Infinite* and *Institutions of Differential Calculus* discussed calculus based on infinitesimal numbers. Infinitesimals were not made entirely unnecessary until Karl Weierstrass rigorously introduced the epsilon-delta definitions of this concept a century later.

Answer: **limit**