

**OSSAA 2024-2025
STATE GAME 1**

**QUARTER 1
TOSS-UP QUESTIONS**

1. This play portrays the struggles of the Tyrone family over the course of one day in 1912. The play is set in the Tyrone family summer home and was inspired by the playwright's own life. Name this work by Eugene O'Neill, which won the Pulitzer Prize for Drama posthumously in 1957.

Answer: *Long Day's Journey into Night*

2. This politician served as the 25th governor of Oklahoma from 1995 to 2003. He led the state through significant events, including the Oklahoma City bombing in 1995, and later authored several children's books, including *Will Rogers: An American Legend*. Name this Republican governor of Oklahoma.

Answer: Frank Keating

3. **Math Computation:** What is the horizontal asymptote of the following rational function? $f(x) = (5x^2 + 7x + 20) / (4x^2 - 2x + 15)$ [read: F of x equals the quantity 5 x squared plus 7x plus 20 end quantity over the quantity 4 x squared minus 2x plus 15 end quantity].

Answer: 5/4

4. These airways branch off from the trachea, carrying air into the lungs where they divide into smaller passages. Lined with cilia and supported by cartilage, they play a key role in respiration. What is the name given to these two main passages of the respiratory system?

Answer: Bronchi

5. **Math Computation:** Find the limit as x approaches infinity of the function: $f(x) = (16x^2 - 5x + 7) / (8x^2 + 2x - 9)$ [read: F of x equals the quantity 16 x squared minus 5x plus 7 end quantity over the quantity 8 x squared plus 2x minus 9 end quantity].

Answer: 2

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6. This Southern Gothic novel features the Bundren family as they navigate floods, fire, and personal turmoil to honor Addie Bundren's burial wish in Jefferson, Mississippi. Written using 15 narrative perspectives, including Darl and the selfish Anse, this work helped solidify its author's reputation. Name this 1930 novel by William Faulkner.

Answer: *As I Lay Dying*

7. This 19th-century political cartoonist is credited with popularizing the Republican Party's elephant and the modern image of Santa Claus. He worked for *Harper's Weekly* and famously attacked Tammany Hall corruption. Name this artist, often called the "Father of the American Cartoon."

Answer: Thomas Nast

8. These electric currents happen within conductors when they are exposed to a changing magnetic field. Commonly found in transformers, electric motors, and magnetic braking systems, they can cause energy loss as heat. What are these currents named for their swirling pattern?

Answer: Eddy Currents

9. This narrative poem tells the story of a woman confined to a tower, cursed to only see the world through a mirror. Drawn by the sight of Sir Lancelot, she leaves her confinement, triggering the curse and leading to her tragic end. What is this 1832 work by Alfred, Lord Tennyson?

Answer: *The Lady of Shalott*

10. This British pop singer-songwriter rose to fame with her self-titled debut album. Known for her modern disco influences, she won the Grammy for Best New Artist in 2019. Who is this artist, whose second album "Future Nostalgia" solidified her status as a pop sensation with hits like *Don't Start Now* and *Levitating*?

Answer: Dua Lipa

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11. This 19th-century Norwegian composer is celebrated for his contributions to Romantic music, often inspired by Scandinavian folk traditions. His most famous works include *Peer Gynt Suite*, which features the iconic *In the Hall of the Mountain King*, and his *Piano Concerto in A minor*. Who is this figure in classical music?

Answer: Edvard Grieg

12. **Math Computation:** Solve the following equation for Z: $(Z + 22) / -7 = 5$ [the quantity Z plus 22 end quantity over negative 7 equals 5].

Answer: (Z=) -57

13. This 2016 fantasy film, directed by Steven Spielberg, follows the friendship between Sophie, an orphaned girl, and a gentle giant who captures dreams and delivers them to children. Together, they work to stop the man-eating giants threatening the human world. Based on a novel by Roald Dahl, what is the title of this heartwarming movie?

Answer: *The BFG*

14. This term refers to the electrode in an electrical device where oxidation occurs. In a galvanic cell, it is the site where electrons leave the cell, while in an electrolytic cell, it attracts anions. What is this positively charged electrode in an electrolytic system or negatively charged in a galvanic cell?

Answer: Anode

15. This U.S. law, enacted in 1911, was one of the first measures to protect classified military information. It made it illegal to obtain, use, or share defense-related information that could harm national security. It served as a precursor to legislation like the Espionage Act. What is this early act focused on protecting national defense secrets?

Answer: Defense Secrets Act

16. This classic children's book, published in 1941, tells the story of Mr. and Mrs. Mallard as they search for a safe home to raise their ducklings in Boston. Known for its charming illustrations and depiction of landmarks like the Public Garden, it won the Caldecott Medal in 1942. What is this beloved work by Robert McCloskey?

Answer: *Make Way for Ducklings*

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17. Math Computation: John has 4 pairs of shoes, 9 pairs of shorts, and 7 shirts to pick from while on vacation. How many different outfits are possible?

Answer: 252

18. This oil exploration and production company is headquartered in Oklahoma City, In 2021, the company produced 463 thousand barrels of oil equivalent per day. What is this company that was founded in 1989 by Aubrey McClendon and Tom L. Ward?

Answer: Chesapeake Energy

19. This theoretical phenomenon describes the emission of particles from the event horizon of a black hole due to quantum effects. It suggests that black holes can lose mass and energy over time, eventually evaporating. What is this concept in theoretical physics proposed by physicist Stephen Hawking in 1974?

Answer: Hawking Radiation

20. In October 2024, 14 state attorneys general filed lawsuits against this social media platform, citing concerns over its effects on young users' mental health, including features like endless scrolling and dangerous challenges. Which platform, known for short-form videos, faces these allegations?

Answer: TikTok

Total 1: _____ Total 2: _____

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QUARTER 2
LIGHTNING ROUND

Pop Culture: Billboard Top 100 Hits of 1994

Directions: Given the song, name the artist or group who performed it. All songs were on the Billboard hot 100 in 1994.

<i>I Swear</i>	All-4-One
<i>The Sign</i>	Ace of Base
<i>Can You Feel the Love Tonight</i>	Elton John
<i>Shoop</i>	Salt-n-Pepa
<i>Loser</i>	Beck
<i>Crazy</i>	Aerosmith
<i>Keep Ya Head Up</i>	2Pac
<i>Here Comes the Hotstepper</i>	Ini Kamoze
<i>What is Love</i>	Haddaway
<i>.Shine</i>	Collective Soul

Extras:

<i>. The Power of Love</i>	Celine Dion
<i>.Hero</i>	Mariah Carey

Total 1:_____ **Total 2:**_____

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LIGHTNING ROUND

Pop Culture: A24 Films

Directions: Given a brief description, name the film produced by the company “A24”.

- Two men go insane while staying in a beacon tower. *The Lighthouse*
- Gawain journeys to be beheaded. *The Green Knight*
- A family's ancestry is revealed to have a sinister history. *Hereditary*
- A professor becomes fascinated by an actor who looks like him. *Enemy*
- Based on a book about Tommy Wiseau and *The Room*. *The Disaster Artist*
- Photographers capture violent unrest in America. *Civil War*
- A kidnapped woman raises her son in captivity. *Room*
- A criminal goes on a journey to bust his mentally ill brother out of jail. *Good Time*
- An obese teacher attempts to reconnect with his estranged daughter. *The Whale*
- A Korean family faces issues starting a farm in 1980s Arkansas. *Minari*

Extras:

- .A deceased man in a white sheet watches his living wife. *A Ghost Story*
- .A podcaster is kidnapped by a man who wants to turn him into a walrus. *Tusk*

Total 1: _____ Total 2: _____

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LIGHTNING ROUND**

College Basketball Team Nicknames

Directions: Given the name of a college, give the nickname of their basketball team.

University of North Carolina	Tar Heels
Michigan State University	Spartans
Louisiana State University (LSU)	Tigers
University of Texas	Longhorns
Syracuse University	Oranges
University of Kentucky	Wildcats
Washington State University	Cougars
Arizona State University	Sun Devils
University of California, Los Angeles (UCLA)	Bruins
.Wake Forest University	Demon Deacons

Extras:

.Duke University	Blue Devils
.Ohio State University	Buckeyes

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21. This term refers to all the water on Earth, including oceans, rivers, lakes, glaciers, groundwater, and atmospheric moisture. It plays a crucial role in regulating the planet's climate, supporting life, and shaping geological processes. What is this system that encompasses Earth's water in all its forms?

Answer: Hydrosphere

22. **Math Computation:** What is the surface area of a cylinder with a radius of 4 feet and a height of 10 feet?

Answer: 112π square feet

23. This ancient Mesopotamian city, one of the first major urban centers in history, thrived around 4000 BCE in what is now Iraq. It was a hub of innovation, credited with early developments in writing, monumental architecture, and organized governance. Associated with the king Gilgamesh, what is this city of the Sumerian civilization?

Answer: Uruk

24. Name the American chemist and peace activist who won the Nobel Prize in Chemistry in 1954 for his research on chemical bonding and the Nobel Peace Prize in 1962 for his advocacy against nuclear weapons testing, becoming one of the few individuals to receive two Nobel Prizes in different fields.

Answer: Linus Pauling

25. This novel, a modern take on Howards End, centers on the lives of two families connected by academia and explores themes of race, class, and politics. The story is set at a fictional university in New England and follows characters like Howard Belsey, an art history professor, and his strained relationship with his family. What is the title of this 2005 novel by Zadie Smith?

Answer: On Beauty

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26. This video game character was created for *Star Wars: The Force Unleashed* and takes his name from the rejected name that was originally given to Luke Skywalker. Who is this powerful force user and adopted apprentice of Darth Vader who is the lead character in The Force Unleashed 1 and 2?

Answer: Starkiller (Also accept Galen Marek)

27. This astronomical phenomenon occurs when the wavelength of light from an object is stretched, shifting it toward the red end of the spectrum. It is observed in distant galaxies and is a key piece of evidence for the universe's expansion, as described by Hubble's Law. What is this effect, also associated with the Doppler effect?

Answer: Redshift

28. This uprising, also known as the Sepoy Mutiny, was a major, but ultimately unsuccessful, revolt against British rule in India. It led to widespread conflict across northern and central India. What is this 1857 uprising that marked a turning point in Indian colonial history?

Answer: Indian Rebellion of 1857

29. This autobiographical manifesto became a foundational text for the Nazi Party. Outlining plans for Germany's future under National Socialism, this controversial book that had a profound and destructive impact on world history. What is this book written by Adolf Hitler during his imprisonment in 1924?

Answer: *Mein Kampf*

30. **Math Computation:** Solve the following equation for W: $4(3W + 2) - 5(2W - 3) = 14$ [4 times the quantity $3W$ plus 2 end quantity minus 5 times the quantity $2W$ minus 3 end quantity equals 14].

Answer: ($W =$) $-9/2$ or -4.5

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31. Taking place near modern-day Iraq, this battle is renowned for Alexander's strategic brilliance despite being outnumbered. Name this decisive battle, fought in 331 BCE, which saw Alexander the Great defeat the Persian King Darius III, and secured control over the Achaemenid Empire.

Answer: Battle of Gaugamela

32. This art form involves weaving designs into fabric, often depicting scenes of history or mythology. Created on a loom, it uses warp and weft threads, with intricate patterns made from dyed yarn. Famous examples include *Lady and the Unicorn*, showcasing each of the five senses with the addition of desire. What is this decorative textile art?

Answer: Tapestry

33. **Science computation:** Convert 15 gigahertz into millihertz in correct scientific notation.

Answer: 1.5×10^{13} [read: 1.5 times ten to the thirteenth (power)]

34. This line of latitude became a significant geopolitical boundary after World War II, dividing Korea into Soviet-controlled North Korea and U.S.-controlled South Korea. It remains the basis for the Korean Demilitarized Zone (DMZ) following the Korean War. What is this dividing line?

Answer: 38th Parallel

35. A restoration of this historic landmark in Detroit, which originally opened in 1913, has transformed the once-abandoned building into a central hub for technology and culture. Which iconic station did Ford Motor Company reopen on June 6, 2024 as part of a revitalization project?

Answer: Michigan Central Station

36. This Pulitzer Prize-winning book, published in 1956, tells the stories of eight U.S. senators who showed bravery by standing up for their principles despite personal and political risks. Written by a U.S. president, what is this work attributed to John F. Kennedy?

Answer: *Profiles in Courage*

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TOSS-UP QUESTIONS

37. **Math Computation:** What is the exact value of the cosine of 240 degrees?

Answer: -1/2 (or -0.5)

38. This Newbery Medal-winning novel, set in the late 19th century, follows Sarah Wheaton, who moves from Maine to the midwest, answering a widowed farmer's ad for a wife to help raise his two children, Anna and Caleb. Sarah's adjustment to prairie life and the family's hope for her to stay drive the story. What is this 1985 classic by Patricia MacLachlan?

Answer: *Sarah, Plain and Tall*

39. This city, one of the oldest continuously inhabited in the world, has been a cultural and economic center in the Middle East for millennia. Once part of the ancient Aramean, Roman, and Islamic empires, it is known for landmarks like the Umayyad Mosque. Mentioned in the conversion story in the book of Acts, what is this capital of Syria?

Answer: Damascus

40. These tiny, balloon-like structures in the lungs are where gas exchange occurs. Oxygen passes from the air into the blood, and carbon dioxide is expelled during exhalation. Surrounded by capillaries, they maximize surface area for efficient diffusion. What are these essential components of the respiratory system?

Answer: Alveoli

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QUARTER 4
LIGHTNING ROUND**

Math - Factoring

Directions: Factor each of the following expressions to the simplest form. When giving your answer be sure to say parenthesis and end parenthesis in your answer.

$2y - 8$	$2(y - 4)$
$2x - 6y$	$2(x - 3y)$
$4x^2 + 4x + 1$	$(2x + 1)^2$
$4x^2 - 4x + 1$	$(2x - 1)^2$
$4x^2 - 4xy + y^2$	$(2x - y)^2$
$x^2 - 4x + 4$	$(x - 2)^2$
$x^2 - 12x + 36$	$(x - 6)^2$
$16x^2 - 1$	$(4x + 1)(4x - 1)$
$x^2 + 6x + 9$	$(x + 3)^2$
$x^2 + 10x + 25$	$(x + 5)^2$

Extras:

$.9x^2 - 1$	$(3x + 1)(3x - 1)$
$.x^2 - 9$	$(x + 3)(x - 3)$

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**QUARTER 4
LIGHTNING ROUND**

Science: Biology "M" Terms

Directions: From the definitions given, identify each term that begins with the letter "M".

Seasonal movement of animals	Migration
Essential nutrient needed for maintenance of an organism	Mineral
Organism with both male and female reproductive organs	Monoecious
Small structure in ciliates involved in reproduction	Micronucleus
Protein which makes up part of the filaments in striated muscle	Myosin
Member of class of arthropods characterized by 2 pairs of legs per segment	Millipede
Type of adaptation which involves the structures of organisms	Morphological
Substance in saliva which moistens food so it can be swallowed easily	Mucin
Mouth part adapted for biting and chewing	Mandible
. Material that composes the cell wall of prokaryotes	Murein

Extras:

. Large structure in ciliates that controls the basic activities of a cell	Macronucleus
. Study of fungi	Mycology

Total 1: _____ Total 2: _____

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Social Studies: Revolutionary War Terms

Directions: Identify each person, place, term, or event associated with the American Revolution.

Total 1: _____ Total 2: _____

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Actual hill where the Battle of Bunker Hill was fought	Breed's Hill
The leading American Minister to France	Benjamin Franklin
First battles of the Revolution	Lexington and Concord
First to sign the Declaration of Independence	John Hancock
General who commanded the French troops at Yorktown	Jean Rochambeau
Nationality of the British mercenaries defeated at Trenton	Hessians
Treaty that ended the war	Treaty of Paris
British general in command at Bunker Hill	Thomas Gage
British general who surrendered at Saratoga	John Burgoyne
Prime Minister of Britain during the Revolution	Frederick North

Extras:

. “T” Term for the colonists who supported Great Britain	Tory
. Prussian who organized the Continental Army	Frederick von Steuben

Extra Questions

- Having served as the head of the Federal District, this leader has been an influential figure in Mexican politics. Who is this leader who assumed the presidency of Mexico in 2018 and has since represented the nation on various platforms?

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Answer: Andrés Manuel López Obrador

2. This luxury train, established in 1883, became famous for its opulent service and routes connecting Paris to Istanbul, passing through major European cities. Known for its association with intrigue and mystery, it inspired a popular murder mystery by Agatha Christie. What is this legendary train called?

Answer: The Orient Express

3. This 1811 novel tells the story of the Dashwood sisters, Elinor and Marianne, who face financial hardship after their father's death due to inheritance laws favoring their half-brother. What is this debut work by Jane Austen?

Answer: *Sense and Sensibility*

4. **Math Computation:** Multiply the following monomials together and simplify your answer: $7xy^5z^3$ times $14x^6y^3z^{-2}$ [7 x y to the fifth z cubed times 14 x to the sixth y cubed z to the negative second].

Answer: $98x^7y^8z$ [98x to the seventh (power) y to the eighth (power) z]

5. This psychological and physiological phenomenon occurs when a person experiences a real improvement in their condition after receiving a treatment with no active therapeutic effect, often due to their belief in its efficacy. Widely studied in clinical trials, what is this effect highlighting the power of perception in medicine?

Answer: Placebo Effect

6. **Math Computation:** Find the value of c that makes the following quadratic into a perfect square: $x^2 + 9x + c$ [read: x squared plus 9x plus c].

Answer: (c=) 20.25 (or 81/4)

7. This architectural feature provides additional support to a structure by transferring the weight of walls or roofs to the ground. Common in Gothic cathedrals, it includes the flying version, which extends outward to allow for taller walls and larger windows. What is this structural element called?

Answer: Buttress

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8. These monumental structures served as ceremonial centers for rituals, sacrifices, and astronomical observations in ancient Mesoamerican cities. Notable examples include those at Chichen Itza and Tikal, showcasing advanced engineering and alignment with celestial events. What are these iconic Mayan architectural achievements?

Answer: Temples (or pyramids)

9. This 1938 book examines the Nazi education system, highlighting how children were indoctrinated with propaganda to align with the regime's ideology. Written by Erika Mann, it explores the transformation of German schools under Hitler and the impact on young minds. What is this critical account of Nazi-era schooling?

Answer: *School for Barbarians*

10. These single-celled marine organisms are characterized by their intricate shells, called tests, which are often made of calcium carbonate. Found in both modern oceans and fossil records, they play a key role in studying past climates and marine environments. What are these protists widely used in paleoclimatology and biostratigraphy?

Answer: Foraminifera

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**QUARTER 1
TOSS-UP QUESTIONS**

1. This ancient structure, built on the island of Pharos in the 3rd century BCE, was one of the Seven Wonders of the Ancient World. Standing over 100 meters tall, it guided sailors safely into a busy harbor in Egypt. What is this famous lighthouse considered a marvel of engineering?

Answer: Lighthouse of Alexandria

2. This 2000's action-adventure video game was exclusive to the Nintendo 64, and is considered one of the best games of all time. What is this game, the sixth in the Legend of Zelda series, where Link must race against time to prevent the moon from crashing into the Earth?

Answer: *The Legend of Zelda: Majora's Mask*

3. This 1976 novel traces the lineage of an African man, Kunta Kinte, who is captured and sold into slavery, and his descendants in America over generations. Spanning from the time of slavery to the 20th century, the novel became a significant cultural touchstone and was adapted into a television miniseries. Identify this work by Alex Haley.

Answer: *Roots*

4. This body system plays a crucial role in immune defense and fluid balance by transporting lymph, a fluid containing white blood cells, throughout the body. It includes structures like lymph nodes, the spleen, and the thymus, and helps remove waste and toxins. What is this vital system in human physiology?

Answer: Lymphatic System

5. This 1996 disaster film was largely shot in Oklahoma and received a sequel in 2024. What is this film, directed by Jan De Bont, that stars Helen Hunt and Bill Paxton as storm chasers who race to get a new measuring device inside dangerous tornadoes?

Answer: *Twister*

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TOSS-UP QUESTIONS**

6. This 1876 battle saw a coalition of Lakota, Northern Cheyenne and Arapaho warriors decisively defeat the 7th U.S. Cavalry. Fought in present-day Montana, it was a key moment in the Great Sioux War. What is this famous conflict, also known as "Custer's Last Stand,"?

Answer: Battle of Little Bighorn

7. This Pulitzer Prize-winning novel, published in 1947, is a collection of interconnected stories set during World War II, focusing on the lives of American servicemen and locals on South Pacific islands. Inspiring a musical by Rodgers and Hammerstein, What is this work by James A. Michener?

Answer: *Tales of the South Pacific*

8. In October 2024, McDonald's announced it would resume selling this popular burger in 900 locations after ruling out beef patties as the source of an E. coli outbreak. Which menu item, now being served without slivered onions, was affected?

Answer: Quarter Pounder

9. **Math Computation:** Convert the binary number 1101101 [read: one one zero one one zero one] to a base 10 number.

Answer: 109

10. This type of motion occurs when an object oscillates back and forth around an equilibrium position under a restoring force proportional to its displacement. Examples include the motion of a pendulum or a mass on a spring. What is this type of motion?

Answer: Harmonic Motion

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11. **Science computation:** Convert 312 tera pascals into kilopascals in correct scientific notation.

Answer: 3.12×10^{11} [read: 3.12 times ten to the eleventh (power)]

12. This medieval cathedral, located in Trondheim, Norway, was built over the burial site of Saint Olaf, the patron saint of Norway. Constructed in the Gothic and Romanesque styles, it served as a pilgrimage destination during the Middle Ages and remains a key symbol of Norwegian heritage. What is this historic church called?

Answer: Nidaros Cathedral

13. Name the law that describes the relationship between the angles of incidence and refraction when light passes between two transparent media, stating that the ratio of the sines of these angles is equal to the refractive indices of the media. It is named after a Dutch mathematician and physicist.

Answer: Snell's Law

14. This 19th-century illustrated book contains detailed hand-painted depictions of North American bird species, celebrated for their accuracy and artistic quality. Created by a naturalist and artist who traveled extensively to study his subjects, it is considered a masterpiece of ornithological art. What is this work by John James Audubon?

Answer: *The Birds of America*

15. **Math Computation:** Find the limit as x approaches zero of the function: $f(x) = (x^4 + 3x^2 - 9) / (2x^3 + 5x^2 - 12)$ [read: F of x equals the quantity x to the fourth plus 3x squared minus 9 end quantity over the quantity 2 x cubed plus 5 x squared minus 12 end quantity].

Answer: $\frac{3}{4}$ or 0.75

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16. This movement in the Byzantine Empire began with Emperor Leo III and involved the prohibition and destruction of religious images. It caused significant controversy and division within the empire until it was ended by a church council in 843. Literally meaning “image breaking” what is this movement called?

Answer: Iconoclasm

17. This satirical poetry collection, first published in 1848, critiques the Mexican-American War and other social issues through the voice of a fictional New England farmer named Hosea Biglow. Written in Yankee dialect, it combines humor and political commentary. What is this work by James Russell Lowell?

Answer: *The Biglow Papers*

18. This phenomenon describes how the rotation of the Earth causes moving objects, such as air or water currents, to deflect to the right in the Northern Hemisphere and to the left in the Southern Hemisphere. It influences weather patterns, ocean currents, and the rotation of cyclones. What is this effect called?

Answer: Coriolis effect

19. **Math Computation:** Simplify: $\log_6(1/216)$ [log base 6 of 1 over 216].

Answer: -3

20. In music theory, this organizational tool is used to display all permutations of a twelve-tone row, including transpositions, inversions, and retrogrades. It ensures that each of the twelve chromatic pitches is used without repetition before others are introduced. Name this systematic grid, essential in serial composition.

Answer: Matrix

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QUARTER 2
LIGHTNING ROUND**

Fine Arts: Art "P" Terms

Directions: Given a brief description, name the art term beginning with the letter "P".

A collage made with cut or torn paper, from French for “pasted paper.”	Papier Collé
A drawing medium made of powdered pigment in stick form.	Pastel
Art that portrays idealized rural scenes.	Pastoral
A technique creating the illusion of depth on a flat surface.	Perspective
A substance that provides color to paint or ink.	Pigment
An artwork that focuses on a person's face or head.	Portrait
The craft of shaping and firing clay objects.	Pottery
Red, yellow, and blue—colors that can't be made by mixing others.	Primary Colors
The recorded history of an artwork's ownership and origin.	Provenance
.An art style striving for highly detailed, lifelike realism	Photorealism

Extras:

.A wide, continuous view or depiction.	Panorama
.A surface (or range of colors) used by an artist to mix paints.	Palette

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QUARTER 2
LIGHTNING ROUND
Social Studies: Kings and Emperors**

Directions: Given the description, name the king or emperor.

In 1621, Richelieu became his chief minister	Louis XIII
Emperor of Austria when World War I began	Franz Joseph
Prussian King whose army defeated the French at Rossbach	Frederick II (the Great)
He was restored to the English throne in 1660	Charles II
King of England when the War of the Roses began	Henry VI
King of Great Britain during World War II	George VI
First emperor of the Mongol Dynasty in China	Kublai Khan
He launched the Spanish Armada against England	Philip II
He completed the conquest of the Moors in Spain	Ferdinand
.Byzantine Emperor who built the Hagia Sophia	Justinian I

Extras:

- .King of Great Britain during the Napoleonic Wars George III
- .The Bayeux Tapestry tells of his invasion of England William I (the Conqueror)

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LIGHTNING ROUND**

Literature: Shakespeare Plays by Quotes

Directions: Given a quote from a famous Shakespearean play, name the play.

"To be, or not to be: that is the question." *Hamlet*

"All the world's a stage, And all the men and women merely players." *As You Like It*

"A horse! a horse! my kingdom for a horse!" *Richard III*

"Love looks not with the eyes, but with the mind." *A Midsummer Night's Dream*

"If music be the food of love, play on." *Twelfth Night*

"Et tu, Brute?" *Julius Caesar*

"a rose by any other name would smell as sweet." *Romeo and Juliet*

"All that glitters is not gold." *The Merchant of Venice*

"The better part of valor is discretion." *Henry IV, Part 1*

. "Once more unto the breach, dear friends, once more." *Henry V*

Extras:

. "Double, double toil and trouble; Fire burn, and caldron bubble." *Macbeth*

. "O brave new world, That has such people in't!" *The Tempest*

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QUARTER 3
TOSS-UP QUESTIONS**

21. This cultural movement, emerging in the 1950s, was characterized by a rejection of mainstream values, materialism, and conformity. Its members embraced experimental art, jazz, poetry, and spiritual exploration. What is this group, associated with figures like Jack Kerouac and Allen Ginsberg?

Answer: Beatniks

22. This type of verb requires a direct object to complete its meaning. What is this type of verb shown by the word "throw" in the sentence "She throws the ball."

Answer: Transitive Verb

23. **Math Computation:** Convert the base ten number 42 into a hexadecimal number.

Answer: 2A

24. This body of water, the third-largest ocean on Earth, is bordered by Africa, Asia, Australia, and the Southern Ocean. Known for its role in ancient trade routes, it is home to diverse marine ecosystems and important currents like the monsoon-driven Indian Ocean gyre. What is this ocean called?

Answer: The Indian Ocean

25. This New Testament book, written by Paul, addresses the church in a city known for its diverse population and moral challenges. It includes the famous "Love Chapter" and teachings on spiritual gifts. Which epistle is this, written to the believers in a city in Greece?

Answer: 1 Corinthians

26. This 14th-century literary work is a collection of 100 stories told by a group of ten young people seeking refuge from the Black Death in a villa outside Florence. The tales offer a vivid portrait of medieval society. What is this masterpiece by Giovanni Boccaccio?

Answer: *The Decameron*

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STATE GAME 2
QUARTER 3
TOSS-UP QUESTIONS**

27. This 2024 sci-fi film was released on Netflix and stars Adam Sandler in a serious role. What is this film, directed by Johan Renck, about a lonely astronaut who befriends an alien spider while dealing with past traumas and mistakes?

Answer: *Spaceman*

28. In October, 2024, conservationists from this U.S.-based organization successfully reintroduced peregrine falcons to the Midwest after their population plummeted due to pesticide use. What group, established by Bob Anderson, continues to monitor the health and population of these apex predators?

Answer: Raptor Resource Project

29. **Math Computation:** What is the equation of the line with a slope of -3 through the point (2,7) [read: 2 comma 7] in slope-intercept form?

Answer: $y = -3x + 13$

30. This mineral, known for its softness and greasy feel, is the lowest on the Mohs hardness scale. Often used in powdered form for cosmetics, ceramics, and industrial applications, it is composed of hydrated magnesium silicate. What is this mineral commonly found in metamorphic rocks?

Answer: Talc

31. Name this first novel in a fantasy series for young readers about an 11-year-old boy who discovers the hidden Underland beneath New York City, where humans and giant creatures coexist, and he is drawn into a prophecy about the fate of this world. What is this work written by Suzanne Collins?

Answer: *Gregor the Overlander*

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QUARTER 3
TOSS-UP QUESTIONS**

32. This term refers to the region around a star where conditions are just right for liquid water to exist on a planet's surface, making it potentially habitable. It is based on the balance of distance and temperature, crucial for sustaining life. What is this zone named for its "just right" conditions?

Answer: Goldilocks Zone

33. This ancient citadel, perched on a rocky hill above Athens, contains several iconic structures from Classical Greece, including the Parthenon, the Erechtheion, and the Temple of Athena Nike. It served as a religious and cultural center dedicated to the goddess Athena. What is this historic site, symbolizing ancient Greek civilization?

Answer: The Acropolis of Athens

34. This 18th-century theologian and preacher was a central figure in the First Great Awakening, known for his fiery sermons emphasizing divine justice and human sinfulness. His most famous sermon, *Sinners in the Hands of an Angry God*, exemplifies his persuasive rhetoric. Who is this influential American revivalist?

Answer: Jonathan Edwards

35. **Math Computation:** Solve for j : $|3j - 5| = 19$ (the absolute value of the quantity $3j$ minus 5 end quantity equals 19).

Answer: ($j=$) 8 and $-14/3$ (must have both)

36. This 13th-century leader united the Mongol tribes and established one of the largest empires in history, spanning Asia and into Europe. Known for his military strategies, administrative reforms, and cultural exchanges, he transformed the Mongol Empire into a dominant power. Who is this ruler, born as Temüjin?

Answer: Genghis Khan

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STATE GAME 2
QUARTER 3
TOSS-UP QUESTIONS**

37. This biological process involves programmed cell death, allowing organisms to eliminate damaged, unnecessary, or harmful cells in a controlled manner. It plays a critical role in development, immune response, and maintaining cellular balance. What is this essential cellular process?

Answer: Apoptosis

38. This musical term, meaning "from the beginning" in Italian, instructs performers to repeat a piece of music from the start until a specified point, often marked by "Fine." Common in classical and baroque compositions, what is this term used to indicate repetition?

Answer: Da Capo

39. **Math Computation:** Solve the following proportion to find x: 12 over 15 equals 10 over x

Answer: (x=) 12.5 or 25/2

40. This coastal landform is a long, narrow island parallel to the mainland, separated by a body of water such as a lagoon or bay. It protects the mainland from storm surges and waves while providing habitats for diverse wildlife. What is this dynamic geological feature often found along sandy coasts?

Answer: Barrier island

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STATE GAME 2
QUARTER 4
LIGHTNING ROUND**

Math - Proportions

Directions: Find the value of "x" in each of the following proportions. Give your answer in decimal or reduced fraction form when needed.

$$\frac{x}{7} = \frac{7}{49}$$
 [x over 7 equals 7 over 49] 1

$$\frac{7}{x} = \frac{4}{5}$$
 [7 over x equals 4 over 5] 8.75 or $\frac{35}{4}$

$$\frac{5}{(x+2)} = \frac{4}{(x-2)}$$
 [5 over the quantity x plus 2 equals 4 over the quantity x minus 2] 18

$$\frac{2}{(x+1)} = \frac{(x-1)}{4}$$
 [2 over the quantity x plus 1 equals the quantity x minus 1 over 4] 3

$$\frac{150}{90} = \frac{3}{x}$$
 [150 over 90 equals 3 over x]

$$\frac{42}{7} = \frac{16}{x}$$
 [41 over 7 equals 16 over x] 1.8 or $\frac{9}{5}$

$$\frac{8}{x} = \frac{x}{32}$$
 [8 over x equals x over 32] 2.67 or $\frac{8}{3}$

$$\frac{18}{x} = \frac{5}{7}$$
 [18 over x equals 5 over 7] 16

$$\frac{121}{x} = \frac{x}{4}$$
 ["121 over x equals x over 4] 25.2 or $\frac{126}{5}$

$$\frac{x}{5} = \frac{15}{3}$$
 [x over 5 equals 15 over 3] 22

Extras: 25

$$\frac{(x-2)}{3} = \frac{(x+7)}{2}$$
 [x minus 2 over 3 equals x plus 7 over 2]

$$\frac{.25}{x} = \frac{x}{4}$$
 [25 over x equals x over 4] -20

10

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QUARTER 4
LIGHTNING ROUND**

Science “B” Terms

Directions: Given the description, name the scientific term that begins with the letter B.

The earth's living matter in all its forms	Biosphere
The outermost layers of a woody stem	Bark
Narrow horizontal portion of a beach built by wave action	Berm
The planetary atom model	Bohr Atom
Mollusks which have two shells	Bivalves
Organisms that live on the bottom of the ocean	Benthos
Point at which a liquid changes to a gas	Boiling Point
Compound which maintains pH at a fairly constant level	Buffer
A manometer used to measure atmospheric pressure	Barometer
.Ball of cells formed as a zygote begins to divide	Blastocyst

Extras:

.The random motion of colloidal particles	Brownian
.Subatomic particle classified as a large hadron	Baryon

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STATE GAME 2
QUARTER 4
LIGHTNING ROUND**

Social Studies: State Nicknames

Directions: Given the nickname, name the U.S. state.

The Volunteer State	Tennessee
The Prairie State	Illinois
The Ocean State	Rhode Island
The Palmetto State	South Carolina
The Hawkeye State	Iowa
The Beehive State	Utah
The Grand Canyon State	Arizona
The Badger State	Wisconsin
The Pine Tree State	Maine
.The Silver State	Nevada

Extras:

.The Bay State	Massachusetts
.The Tar Heel State	North Carolina

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Extra Questions

1. **Math Computation:** Convert into a hexadecimal number, the base ten number 200.

Answer: C8

2. This Roman general and statesman played a pivotal role in the transition from the Roman Republic to the Roman Empire. Known for his military conquests, including the Gallic Wars, he declared himself dictator for life, leading to his assassination in 44 BCE. Who is this historical figure central to Roman history?

Answer: Julius Caesar

3. These small, bean-shaped structures are part of the lymphatic system and act as filters for lymph fluid. They house immune cells that detect and fight infections, swelling in response to inflammation or illness. Found in clusters in areas like the neck, armpits, and groin, what are these vital components of the immune system?

Answer: Lymph nodes

4. This group of African American pilots formed in 1941 and were the first black military aviators in the U.S. Army Air Forces. Who were these pilots who flew with distinction during World War II and helped to encourage the eventual integration of the U.S. armed forces?

Answer: Tuskegee Airmen

5. This 20th-century American author and activist gained acclaim for his powerful explorations of race and identity. Growing up in Harlem, he used his experiences to craft novels like *Go Tell It on the Mountain* and *Giovanni's Room*. His essays became essential texts during the civil rights movement. Who is this iconic literary figure?

Answer: James Baldwin

6. **Science Computation:** How many atoms are present in 3.000 moles of oxygen gas? Use 6.022×10^{23} [read: 6.022 times ten to the twenty third] atoms per mole and leave your answer in scientific notation.

Answer: 3.613×10^{24} [read: 3.613 times ten to the twenty fourth]

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7. This NFL team has won six Super Bowl championships, tied for the most in NFL history as of 2023, with victories spanning from 2001 to 2018. They were led by quarterback Tom Brady and coach Bill Belichick during their dynasty. What is this team based in Foxborough, Massachusetts?

Answer: New England Patriots

8. This 1951 collection of interconnected science fiction stories is framed by the narrative of a man whose tattoos come to life, revealing different tales; it includes iconic stories like "The Veldt" and "Kaleidoscope." What is this classic work by Ray Bradbury?

Answer: *The Illustrated Man*

9. This auditory phenomenon occurs when two tones of slightly different frequencies are played in each ear, creating the perception of a third tone, or beat, in the brain. It is believed to influence brainwave activity and is often used for relaxation, focus, or meditation. What is this technique called?

Answer: Binaural beats

10. This modern technique uses computer graphics to create characters, environments, and effects. It allows for highly detailed and complex animations that would be difficult to achieve with traditional methods. Name this technique which is prominently used by Pixar in films like *Toy Story* and *Cars*?

Answer: Computer-Generated Imagery (Accept: CGI)

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STATE GAME 3**

**QUARTER 1
TOSS-UP QUESTIONS**

1. This 1997 Supreme Court case addressed whether a Washington State law banning physician-assisted suicide violated the Due Process Clause of the Fourteenth Amendment. Name this case where the Court ruled unanimously that there is no constitutional right to assisted suicide, emphasizing life and ethical medical practices.

Answer: Washington v. Glucksberg

2. **Math Computation:** Convert the rectangular coordinates $(2, \sqrt{2})$ [2 comma radical 2] into polar coordinates. Express your answer as (r, θ) [r comma theta], with theta in pi and radians.

Answer: $(\sqrt{6}, \pi/4)$

3. This astronomical event occurs twice a year when the Sun reaches its highest or lowest point in the sky relative to the equator, resulting in the longest or shortest day of the year. These events mark the beginning of summer and winter. What is this phenomenon called?

Answer: Solstice

4. **Math Computation:** Solve the following equation for x: the square root of the quantity 4x plus 5 end quantity equals 11.

Answer: $(x=) 29$

5. This poetry collection, first published in 1855 reflected the spirit of 19th-century America. The author continuously revised it throughout his life, adding iconic poems like *Song of Myself* and *O Captain! My Captain!* What is this landmark work by Walt Whitman?

Answer: *Leaves of Grass*

6. **Math Computation:** Add and simplify the following radicals: $\sqrt{32} + \sqrt{50}$ [read: radical 32 plus radical 50].

Answer: $9\sqrt{2}$ [read: 9 radical 2 or 9 times the square root of 2]

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QUARTER 1
TOSS-UP QUESTIONS**

7. This early 20th-century American novelist and playwright is best known for his works exploring Midwestern life and societal changes during the turn of the century. He won the Pulitzer Prize for *The Magnificent Ambersons* and *Alice Adams*. Who is this author celebrated for his depictions of American middle-class life?

Answer: Booth Tarkington

8. This automotive company reintroduced its iconic microbus as an electric vehicle in 2024, now known as the ID Buzz. Originally a symbol of the 1960s and '70s, the updated van marks the company's push into the electric vehicle market. Which company, known for models like the Beetle, launched this vehicle?

Answer: Volkswagen

9. This landmass, which existed around 335 to 175 million years ago, combined nearly all of Earth's landmasses into a single entity. Known for its role in plate tectonics, it eventually broke apart to form the modern continents. What is the name of this ancient supercontinent?

Answer: Pangaea

10. **Math Computation:** Solve the following equation for M: $1/5M + 6 = 21$ [read: one fifth M plus 6 equals 21].

Answer: (M=) 75

11. This drama series ran for seven seasons from 2007 to 2015 on AMC. What is this series, created by Matthew Wiener, that is set in the 1960s and stars Jon Hamm as a mysterious and talented ad executive named Don Draper?

Answer: Mad Men

12. This class of cold-blooded vertebrates typically has a life cycle that includes both aquatic and terrestrial stages, beginning as larvae in water before undergoing metamorphosis. Examples include frogs, salamanders, and caecilians. Known for their permeable skin, what is this group of animals that depends on moist environments?

Answer: Amphibian

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QUARTER 1
TOSS-UP QUESTIONS**

13. This luxury department store, founded in 1909 on Oxford Street in London, is renowned for its innovative retail concepts and iconic window displays. Established by American entrepreneur Harry Gordon, it was one of the first stores to prioritize customer experience and modern shopping. What is this landmark of British retail?

Answer: Selfridges

14. This term refers to a solid material whose atoms, ions, or molecules are arranged in a highly ordered, repeating pattern extending in all three spatial dimensions. Examples include quartz, diamonds, and salt. Often used in jewelry and electronics, what is this structure known for its symmetry and precision?

Answer: Crystal

15. This series of short films were produced by the U.S. government during World War II and used characters created by Chuck Jones to boost war bond sales and disseminate anti-Axis powers propaganda. What is the collective name for these films that included notable titles such as *No Buddy Atoll* and *Hot Spot*?

Answer: *Private Snafu*

16. This running back was drafted by the Minnesota Vikings in 2007 and quickly established himself as one of the most explosive and powerful runners in the NFL. He won the MVP award in 2012 after rushing for 2,097 yards, just eight yards shy of the single-season record. Who is this player known as "All Day" for his relentless play style?

Answer: Adrian Peterson

17. This 1721 satirical novel takes the form of fictional letters exchanged between two Persian travelers in Europe and their correspondents back home. Through their observations, it critiques the European society of the time. What is this work by Enlightenment philosopher Montesquieu?

Answer: *Persian Letters*

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QUARTER 1
TOSS-UP QUESTIONS**

18. This German composer and pianist, active during the late 18th and early 19th centuries, is known for bridging the Classical and Romantic eras. Despite becoming deaf later in life, he produced masterpieces like the *Fifth Symphony* and *Moonlight Sonata*. Who is this iconic figure in music?

Answer: Ludwig van Beethoven

19. This building in Constantinople was originally constructed as a Christian cathedral and later converted into a mosque. Known for its massive dome, it exemplifies Byzantine architecture and was constructed under the orders of Emperor Justinian I. It was completed in 537 A.D. What is this structure?

Answer: Hagia Sophia

20. This author and poet, known for his dark and macabre tales, was born in 1809. Famously having written the “first modern detective story” he is also known for short stories such as *The Tell-Tale Heart* and *The Fall of the House of Usher*. Name this American writer, considered a master of Gothic fiction.

Answer: Edgar Allan Poe

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QUARTER 2
LIGHTNING ROUND**

Literature - Great Expectations Characters

Directions: From the descriptions given, name each of the following characters who appear in Charles Dickens' novel *Great Expectations*.

Pip's sister and a strict disciplinarian	Georgiana Gargery
The lonely, embittered old spinster	Ms. Havisham
Miss Havisham's ward	Estella
Criminal and orphan who acts as benefactor to Pip.	Abel Magwitch
Pip's roommate in London	Herbert Pocket
Mr. Jaggers' clerk known for his odd personality	Wemmick
A criminal lawyer employed by Magwitch	Mr. Jaggers
The villain who betrayed Magwitch and jilted Miss Havisham	Compeyson
A pretty girl engaged to Herbert Pocket	Clara Barley
Mr. Jaggers' housekeeper, a woman of strange habits	Molly

Extras:

. Pip's brother-in-law	Joe Gargery
. A sulky, rich boy notable for his bad manners	Bentley Drummle (The Spider)

Total 1: _____ **Total 2:** _____

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QUARTER 2
LIGHTNING ROUND**

Fine Arts Potpourri

Directions: Name each of the following:

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Title held by the leader of the first violins	Concertmaster
Composer of the famous <i>Polonaise in A-Flat</i>	Frederic Chopin
French painter famous for <i>Impression, Sunrise</i>	Claude Monet
Title of Beethoven's Piano Concerto #5	<i>Emperor</i>
Hero of <i>The Barber of Seville</i>	Figaro
The accidental that raises the pitch of a note by two semitones	Double Sharp
Artist who is regarded as “The Red-Headed Madman”	Vincent van Gogh
A genre of painting in which natural scenery is the object	Landscape
Composer of the song <i>Jeanie With the Light Brown Hair</i>	Stephen Foster
. The common name of the song <i>Londonderry Air</i>	Danny Boy

Extras:

. Title of Mozart's unfinished mass	<i>Requiem</i>
. Composer of the <i>King Cotton March</i>	John Philip Sousa

QUARTER 2
LIGHTNING ROUND

Current World Leaders

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STATE GAME 3****Directions:** Given the country, name the current world leader.

President of Dominican Republic	Luis Abinader
President of the Philippines	Bongbong Marcos
President of Nicaragua	Daniel Ortega
President of Finland	Alexander Stubb
Indonesia	Prabowo Subianto
Prime Minister of the Netherlands	Dick Schoof
President of Iraq	Abdul Latif Rashid
President of Poland	Andrzej Duda
Prime Minister of Croatia	Zoran Milanovic
President of Venezuela	Nicolas Maduro

Extras:

. President of Ireland	Michael Higgins
. Prime Minister of Hungary	Viktor Orban

**QUARTER 3
TOSS-UP QUESTIONS**

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21. This historical novel is set during the Napoleonic Wars and follows a Lieutenant of the Royal Navy. Commanding the cutter HMS Kathleen, Ramage must navigate perilous missions, including saving a group of aristocrats from a besieged Italian fortress. Published in 1965, what is this book by Dudley Pope?

Answer: *Ramage*

22. This U.S. President signed the Violent Crime Control and Law Enforcement Act into law, the largest crime bill in American history. It included provisions for community policing, the federal assault weapons ban, and funding for new prisons. Who is this 42nd President?

Answer: Bill Clinton

23. This Italian composer, born in 1858 in Lucca, hailed from a family of musicians and studied at the Milan Conservatory. Known for his mastery of verismo opera, he survived a near-fatal car accident and died in 1924 of throat cancer. His works include *La Bohème* and *Turandot*. Who is he?

Answer: Giacomo Puccini

24. This 1990 sci-fi film had a remake in 2017 that was a critical and commercial flop. What is this film, directed by Joel Schumacher, that stars Kiefer Sutherland, Julia Roberts, and Kevin Bacon as medical students who attempt to find out what lies beyond death by conducting experiments that produce near-death experiences?

Answer: *Flatliners*

25. **Math Computation:** What is the equation of the line through the point (3, 5) [read: 3 comma 5] and parallel to the line with equation: $y = -2x + 3$? Put your answer in slope-intercept form.

Answer: $y = -2x + 11$

**QUARTER 3
TOSS-UP QUESTIONS**

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26. This artistic and architectural style emerged in early 18th-century France, characterized by ornate decoration, pastel colors, and asymmetrical designs. It emphasized elegance, often seen in furniture, paintings, and interiors. Flourishing during Louis XV's reign, what is this style known as?

Answer: Rococo

27. Name the mood disorder characterized by extreme mood swings between manic or hypomanic episodes and depressive episodes, which can be managed with medication and therapy. It was once referred to as manic depression.

Answer: Bipolar Disorder

28. This British author, born in 1916 in Wales, served as a fighter pilot during World War II before becoming a celebrated writer. Known for his dark humor and imaginative stories, his works include *Matilda*, *Charlie and the Chocolate Factory*, and *The BFG*. Who is this author?

Answer: Roald Dahl

29. This group of non-vascular plants thrives in damp environments and reproduces through spores instead of seeds. They lack true roots, stems, and leaves, but possess structures like rhizoids for anchoring. Examples include mosses, liverworts, and hornworts. What is the name of this plant division?

Answer: Bryophyta (Bryophytes)

30. This landmark U.S. law, signed in 1935 during the Great Depression, established a federal safety net for the elderly, unemployed, and disadvantaged. It introduced retirement benefits funded by payroll taxes and unemployment insurance. What is this act signed by President Franklin D. Roosevelt?

Answer: Social Security Act

**QUARTER 3
TOSS-UP QUESTIONS**

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31. This novel focuses on the lengthy and complex court case of Jarndyce and Jarndyce, which drags on for years, consuming the lives of those involved. The story weaves together the lives of several characters, including Esther Summerson. Name this novel by Charles Dickens.

Answer: *Bleak House*

32. **Science computation:** What is the molecular formula for sodium sulfite?

Answer: Na₂SO₃ [read: N A 2 S O 3]

33. This Japanese organization, representing atomic bomb survivors, received the 2024 Nobel Peace Prize for its efforts to eliminate nuclear weapons. What is the name of this group, whose members are some of the last living reminders of the effects of nuclear warfare?

Answer: Nihon Hidankyo

34. This grammatical term refers to the noun or pronoun that receives the action of a verb in a sentence. What is the term for this component, which can often answer the question "whom" or "what" after the verb?

Answer: Direct Object

35. This economic phenomenon occurs when prices rise uncontrollably at rates exceeding 50% per month, severely eroding currency value. Often caused by excessive money printing, it leads to social unrest and economic collapse, as seen in 1920s Weimar Germany and modern-day Venezuela. What is this extreme form of inflation called?

Answer: Hyperinflation

36. This astronomical event occurs when a white dwarf in a binary system accumulates material from its companion star, triggering a thermonuclear explosion. The result is a sudden brightening, often mistaken for a new star. Unlike supernova, this process does not destroy the white dwarf. What is this phenomenon called?

Answer: Nova

**QUARTER 3
TOSS-UP QUESTIONS**

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37. **Math Computation:** Convert the decimal 0.63 repeating into a fraction in lowest terms.

Answer: 7/11

38. These rocks form from the cooling and solidification of molten material, either magma beneath the Earth's surface or lava erupted from a volcano. They are classified into intrusive types like granite and extrusive types like basalt. What is the name of this category of rocks?

Answer: Igneous rocks

39. This group were German soldiers who served as auxiliaries to the British Army during several major wars in the 18th century including the American Revolutionary War. Who were these German soldiers who are often confused with mercenaries, and are known for their discipline and martial prowess?

Answer: Hessians

40. **Math Computation:** Angle theta is in quadrant three and the sine of angle theta equals negative 5/13. Find the tangent of angle theta.

Answer: 5/12 or 5 over 12

**QUARTER 4
LIGHTNING ROUND**

Math - Solve for x

Total 1: _____ Total 2: _____

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Directions: Solve for x in each equation.

$$12x + 13 = 2x + 83 \quad x = 10$$

$$9x - 4 = 2x - 5 \quad x = -1/7$$

$$6x + 2 = 0 \quad x = -1/3$$

$$16x - 5 = 27 \quad x = 2$$

$$7 - 8x = -57 \quad x = 8$$

$$13x + 2 = 6 - 27x \quad x = 1/10$$

$$x^2 + 2x - 5 = x^2 + x - 2 \quad x = 3$$

$$2x + 21 = 49 - 5x \quad x = 4$$

$$x + 43 = 2x - 26 \quad x = 69$$

$$.7x + 42 = 0 \quad x = -6$$

Extras:

$$.20x - 11 = 49 \quad x = 3$$

$$.6x = 3x + 54 \quad x = 18$$

**QUARTER 4
LIGHTNING ROUND**

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STATE GAME 3
Science: Terms by Letter and Definition**

Directions: Given the first letter and definition, name the science term.

O; mineral which can be mined at a profit	Ore
P; central part of stems	Pith
R; loose material and soil that rests on bedrock	Regolith
S; contraction of the heart chambers	Systole
P; primary division of a kingdom	Phylum
L; energy in the form of stored potential in objects	Latent Energy
V; gas below its critical temperature, but lacking critical pressure	Vapor
A; upward bend of rock strata	Anticline
H; reaction with water to form a weak acid	Hydrolysis
.M; a combination of two or more substances	Mixture

Extras:

.K; energy due to motion	Kinetic
.E; the outer layer of cells covering an organism	Epidermis

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QUARTER 4
LIGHTNING ROUND**

Literature - Authors and their Works

Directions: Given the title, name the author.

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<i>The Pilot: A Tale of the Sea</i>	James Fenimore Cooper
<i>Oedipus at Colonus</i>	Sophocles
<i>The Love Song of J. Alfred Prufrock</i>	T.S. Eliot
<i>Leaves of Grass</i>	Walt Whitman
<i>The Portrait of a Lady</i>	Henry James
<i>Out of the Cradle Endlessly Rocking</i>	Walt Whitman
<i>The Purloined Letter</i>	Edgar Allan Poe
<i>A Rose For Emily</i>	William Faulkner
<i>The Edge of the Sea</i>	Rachel Carson
<i>. The Divine Comedy</i>	<u>Dante Alighieri</u>

Extras:

<i>. Fra Lippo Lippi</i>	Robert Browning
<i>. The Comedy of Errors</i>	William Shakespeare

Extra Questions

1. This term refers to the total collection of genes, including all alleles, within a population of a particular species. It determines genetic diversity and evolves over time due to

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processes like mutation, natural selection, and genetic drift. What is this concept in evolutionary biology called?

Answer: Gene Pool

2. This political principle holds that the authority of a government is created and sustained by the consent of its people through elected representatives. It was a foundational idea in the U.S. Constitution and played a significant role in debates over slavery before the Civil War. What is this concept called?

Answer: Popular Sovereignty

3. **Math Computation:** Find the limit as x approaches zero of the function: $f(x) = (x^4 + 3x^2 - 9) / (2x^3 + 5x^2 - 12)$ [read: F of x equals the quantity x to the fourth plus 3x squared minus 9 end quantity over the quantity 2 x cubed plus 5 x squared minus 12 end quantity].

Answer: $\frac{3}{4}$ or 3 over 4

4. This novel follows a young seaman haunted by an act of cowardice after abandoning a ship in distress. Seeking redemption, he becomes a leader in a remote village but faces a moral dilemma that tests his character. Published in 1900, what is this work by Joseph Conrad?

Answer: *Lord Jim*

5. This comedy movie series has spanned seven films and a television series, with the first film being released in 1984 and kickstarting the career of lead Steve Guttenberg. What is this series about a wacky cast of cops being trained to go on comedic adventures?

Answer: *Police Academy*

6. This South African city, located at the base of Table Mountain, is known for its vibrant culture, historic sites like Robben Island, and proximity to the Cape of Good Hope. Established in 1652 as a Dutch supply station, name this capital of South Africa.

Answer: Cape Town

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7. **Math Computation:** Convert to a hexadecimal number, the base ten number 54.

Answer: 36

8. This musical, based on the real-life Newsboys' Strike of 1899 in New York City, follows Jack Kelly and his fellow newsboys as they fight against unfair treatment by newspaper publishers. Featuring songs like "Seize the Day," what is this Broadway show adapted from a 1992 Disney film?

Answer: Newsies

9. This branch of geology studies rock layers (strata) and their formation, arrangement, and distribution over time. It helps reconstruct Earth's history, including events like volcanic eruptions and sediment deposition. Often used in paleontology and archaeology, what is this field called?

Answer: Stratigraphy

10. This 1936 novel follows Scarlett O'Hara's struggles during the Civil War and Reconstruction, including her marriages and business ventures. Set largely in Georgia, it introduces memorable characters like Melanie Wilkes. Selling millions of copies, it inspired a classic 1939 film. What is this book by Margaret Mitchell?

Answer: *Gone With the Wind*

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STATE GAME 4**

**QUARTER 1
TOSS-UP QUESTIONS**

1. This ancient Buddhist temple, located in Tokyo's Asakusa district, is the oldest in the city, originally completed in 645 AD. It features the iconic Kaminarimon Gate and a bustling shopping street called Nakamise-dori. What is the name of this famous Japanese temple?

Answer: Senso-ji Temple

2. This historical novel, set during the French and Indian War, follows Natty Bumppo, also known as Hawkeye, as he helps protect the Munro sisters from danger. The story features the last members of the Mohican tribe, Chingachgook and Uncas. What is this 1826 novel by James Fenimore Cooper?

Answer: *The Last of the Mohicans*

3. **Math Computation:** Angle C has measure $(3x - 10)$ degrees and angle D has measure $(7x - 30)$ degrees. If angle C and angle D are vertical angles, what is the measure of the angles in degrees?

Answer: 5

4. This comedy series is the longest running live action sitcom, consisting of sixteen seasons that have been ongoing since 2005. What is this series that features an ensemble cast including Charlie Day, Glenn Howerton, and Danny DeVito as narcissistic sociopaths who run a bar?

Answer: *It's Always Sunny in Philadelphia*

5. **Science computation:** 6.32 coulombs of charge pass through a filament of a light bulb in 4.00 seconds. What is the current, in amperes, passing through the bulb?

Answer: 1.58

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STATE GAME 4
QUARTER 1
TOSS-UP QUESTIONS**

6. This branch of government, composed of two houses in a bicameral system in the United States, includes the Senate and the House of Representatives. It plays a key role in checks and balances and is responsible for making laws. What is this branch called?

Answer: Legislative Branch

7. This 1960 sci-fi film was based on a famous H.G Wells short story and had a remake in 2002. What is this classic, directed by George Pal, that stars Rod Taylor as an inventor who travels too far into the future and must help humans fight cave dwelling cannibals called Morlocks.

Answer: *The Time Machine*

8. **Math Computation:** A card is drawn at random from a standard 52-card deck. What is the reduced probability that it will be a face card?

Answer: 3/13

9. These two poets collaborated on a groundbreaking collection of poems that helped launch the Romantic movement in English literature. Published in 1798, it included *The Rime of the Ancient Mariner* and *Lines Composed a Few Miles above Tintern Abbey*. Who are these poets of *The Lyrical Ballads*?

Answer: William Wordsworth and Samuel Taylor Coleridge

10. This legislative act, signed by President Thomas Jefferson, had severe economic impacts on the U.S. and was highly unpopular, especially in New England. It was an attempt to pressure Britain and France to respect American neutrality by prohibiting all American ships from trading in foreign ports. What is this 1807 act?

Answer: The Embargo Act

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STATE GAME 4
QUARTER 1
TOSS-UP QUESTIONS**

11. This process involves injecting high-pressure fluid into underground rock formations to create fractures, allowing oil and natural gas to flow more freely. It has significantly increased energy production but raised concerns about environmental impacts, such as groundwater contamination. What is this extraction technique called?

Answer: Fracking

12. **Math Computation:** What is the slope of the tangent line to the equation: $y = 3x^3 - 4x - 10$ [y equals 3 x cubed minus 4x minus 10] at the point $x = \text{negative } 1$?

Answer: 5

13. This artistic style emerged in The Netherlands during the 20th century and is characterized by abstract, geometric forms, and a focus on color and composition. What is this style that is used by artists like Piet Mondrian and Bart van der Leck?

Answer: De Stijl

14. This type of mineral deposit forms through sedimentary processes when minerals precipitate out of a solution. Such deposits include salt and gypsum, forming in arid regions where water bodies like lakes or seas dry up, leaving behind mineral-rich layers. Identify this type of deposit.

Answer: Evaporite deposit

15. This narrative poem, published in 1842, retells the legend of a mysterious piper who uses his magical music to lead away the children of Hamelin after the townspeople refuse to pay him for removing their rat infestation. What is this work by Robert Browning called?

Answer: *The Pied Piper of Hamelin*

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STATE GAME 4
QUARTER 1
TOSS-UP QUESTIONS**

16. This NASA mission, launched aboard a SpaceX Falcon Heavy rocket aims to study the thick ice layer and potential ocean beneath the surface of one of Jupiter's moons to assess its habitability for life. What is the name of this mission, which will explore one of Jupiter's moons?

Answer: Europa Clipper

17. This double-walled sac surrounds and protects the heart, providing lubrication to reduce friction as the heart beats. It consists of a fibrous outer layer and a serous inner layer that helps to anchor the heart within the chest cavity while allowing it to move freely. What is this membrane that encloses the heart?

Answer: Pericardium

18. This specific type of citation is placed within an essay or paper, often in parenthesis, providing immediate source information. What is this type of citation that correlates to a full reference in the works cited or reference list?

Answer: In-Text Citation

19. This area of the United States has a unique combination of geographic and meteorological factors that make it more susceptible to cyclones. What is this area that includes states like Kansas, Oklahoma, and Arkansas?

Answer: Tornado Alley

20. This fundamental principle of physics states that the total entropy of an isolated system always increases over time, meaning energy becomes more dispersed and less available for work. It explains why heat flows from hot to cold and why systems move toward disorder. What is this law called?

Answer: Second Law of Thermodynamics

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STATE GAME 4
QUARTER 2
LIGHTNING ROUND**

Social Studies: First Ladies by their Presidents

Directions: Given the first name of a U.S. President, give the first name of their first lady.

Barack Obama	<u>Michelle</u> Obama
Donald Trump	<u>Melania</u> Trump
Jimmy Carter	<u>Rosalynn</u> Carter
John F. Kennedy	<u>Jacqueline</u> Kennedy
Ronald Reagan	<u>Nancy</u> Reagan
Bill Clinton	<u>Hillary</u> Clinton
Gerald Ford	<u>Betty</u> Ford
George H. W. Bush	<u>Barbara</u> Bush
George W. Bush	<u>Laura</u> Bush
.Franklin D. Roosevelt	<u>Eleanor</u> Roosevelt

Extras:

.Dwight D. Eisenhower	<u>Mamie</u> Eisenhower
.Richard Nixon	<u>Pat</u> Nixon

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QUARTER 2
LIGHTNING ROUND**

Science: Phobias

Directions: Given the name of a type of phobia, name the fear it represents.

Arachnophobia	Spiders
Acrophobia	Heights
Claustrophobia	Enclosed spaces
Ophidiophobia	Snakes
Cynophobia	Dogs
Trypanophobia	Needles or injections
Astraphobia	Thunder and lightning
Agoraphobia	Open or crowded spaces
Mysophobia	Germs
.Hemophobia	Blood

Extras:

.Nyctophobia	The dark
.Coulrophobia	Clowns

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QUARTER 2
LIGHTNING ROUND**

Social Studies: Asian Capitals

Directions: Given the name of a country in Asia, name the capital.

Cambodia	Phnom Penh
Mongolia	Ulaanbaatar
Nepal	Kathmandu
Kazakhstan	Astana
Myanmar (Burma)	Naypyidaw
Afghanistan	Kabul
Laos	Vientiane
Bhutan	Thimphu
Saudi Arabia	Riyadh
Jordan	Amman

Extras:

.Oman	Muscat
.Iraq	Baghdad

**OSSAA 2024-2025
STATE GAME 4
QUARTER 3
TOSS-UP QUESTIONS**

21. This document, written in 1517, criticized the Catholic Church's sale of indulgences and called for theological reform. Traditionally said to have been posted on a church door in Wittenberg, it sparked the Protestant Reformation. What is this work by Martin Luther called?

Answer: Ninety-Five Theses

22. **Math Computation:** The three angles in a triangle measure $2x$, $4x$, and $6x$ degrees. What are the measures of the three angles in degrees?

Answer: 30, 60, 90

23. This drawing technique involves using a metal stylus, typically made of silver, on a prepared surface coated with gesso or primer. Popular during the Renaissance, it produces fine, delicate lines that tarnish over time, creating a soft patina. What is this artistic method called?

Answer: Silverpoint

24. This 1993 coming of age comedy film directed by David Mickey Evans, stars an ensemble cast of boys who play baseball and lose a signed ball to a large dog in the property next to the baseball field?

Answer: *The Sandlot*

25. This British author and illustrator, born in 1866, is best known for her children's books featuring anthropomorphic animals. Her most famous work, *The Tale of Peter Rabbit*, was self-published before becoming a bestseller. Who is this beloved creator of classic children's literature?

Answer: Beatrix Potter

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QUARTER 3
TOSS-UP QUESTIONS**

26. This term refers to ground that remains completely frozen for at least two consecutive years, typically found in polar regions and high altitudes. It plays a critical role in carbon storage but is increasingly melting due to climate change. What is this geological phenomenon called?

Answer: Permafrost

27. **Math Computation:** Solve the following trigonometric equation for x. $2\cos x - 1 = 0$ [read: 2 cosine of x minus 1 equals zero]. Express both answers in degrees between 0 and 360.

Answer: (x=) 60, 300

28. This genre of art focuses on depicting inanimate objects, such as fruits, flowers, and household items, arranged in a composition that highlights texture, light, and color. Popular during the Dutch Golden Age, it often symbolized themes of mortality and material wealth. What is this art style called?

Answer: Still Life

29. This term refers to the movement of water over land, typically after rain or snowmelt, as it flows into rivers, lakes, or oceans. It can carry pollutants like fertilizers and pesticides, impacting water quality. What is this hydrological process called?

Answer: Runoff

30. This American composer, singer, and actor, born in 1899 in Indiana, became famous for writing timeless jazz standards. His works, including *Stardust*, *Georgia on My Mind*, and *Heart and Soul*, remain widely performed. Who is this influential figure in American popular music?

Answer: Hoagy Carmichael

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QUARTER 3
TOSS-UP QUESTIONS

31. This 1924 novel, set in a Swiss sanatorium before World War I, follows Hans Castorp, whose stay is prolonged due to his failing health. The novel's detailed exploration of illness mirrors European society's decline, and it earned Thomas Mann the 1929 Nobel Prize. What is this work?

Answer: *The Magic Mountain*

32. **Math Computation:** Solve the following inequality to find T: $5(6 - 3T) < 20 - 7T$ [read: 5 times the quantity 6 minus 3T is less than 20 minus 7T].

Answer: $T > \frac{5}{4}$ [read: T is greater than 5/4] or $\frac{5}{4} < T$ {read: 5/4 is less than T}]

33. This 1951 nonfiction book explores the science and history of the oceans, detailing topics such as ocean currents, marine life, and the formation of the Earth's seas. It won the National Book Award and brought widespread attention to marine ecology. What is this work by Rachel Carson?

Answer: *The Sea Around Us*

34. **Math Computation:** Find the limit as x approaches infinity of the expression $(2x^3 - 5x + 7)/(3x^3 + 4x^2 + 5)$ [the quantity 2x cubed minus 5x plus 7 end quantity over the quantity 3x cubed plus 4x squared plus 5 end quantity]

Answer: 2/3

35. In 2024, this company successfully launched the most powerful rocket system to date, capturing its massive booster mid-air with metal arms known as "chopsticks." Which private aerospace company, led by Elon Musk, is developing reusable rocket technology to make space missions more cost-effective, including the system known as Starship?

Answer: SpaceX

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QUARTER 3
TOSS-UP QUESTIONS**

36. This process involves removing salts and other impurities from seawater or brackish water to produce fresh, drinkable water. Common methods include reverse osmosis and distillation, making it a vital technology in arid regions. What is this water purification process called?

Answer: Desalination

37. This 1993 U.S. law mandated federal background checks and a waiting period for firearm purchases from licensed dealers. Named after a White House press secretary injured during an assassination attempt on President Reagan, what is this gun control legislation called?

Answer: Brady Bill (Brady Act)

38. This 1949 memoir recounts the experiences of a musically gifted Austrian family who fled Nazi-occupied Austria and settled in the United States, where they gained fame for their singing tours. It inspired the Broadway musical and film *The Sound of Music*. What is this work by Maria von Trapp?

Answer: *The Trapp Family Singers*

39. This Cold War-era foreign policy strategy involves pushing dangerous situations to the edge of conflict to force an opponent to back down. Associated with leaders like John Foster Dulles, it was key during crises such as the Cuban Missile Crisis. What is this strategy called?

Answer: Brinkmanship

40. This term refers to a type of map projection that represents the Earth's surface as viewed from a specific point, often used for polar regions or air route maps. It preserves accurate direction but distorts distances and areas. What is this projection method called?

Answer: Azimuthal

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QUARTER 4
LIGHTNING ROUND**

MATH - Solving Simple Inequalities

Directions: Solve the following simple inequalities. State your answer with the x term first.

$$5x - 7 < 13 \text{ [five } x \text{ minus 7 is less than 13]} \quad x < 4$$

$$3x - 4 < 11 \text{ [three } x \text{ minus 4 is less than 8]} \quad x < 5$$

$$-2x + 11 > 25 \text{ [negative } 2x \text{ plus 11 is greater than 25]} \quad x < -7$$

$$6x + 2 > 14 \text{ [six } x \text{ plus 2 is greater than 14]} \quad x > 2$$

$$4x + 3 < 27 \text{ [four } x \text{ plus three is less than twenty-seven]} \quad x < 6$$

$$7x - 10 > 11 \text{ [seven } x \text{ minus ten is greater than eleven]} \quad x > 3$$

$$5x + 6 > -29 \text{ [five } x \text{ plus six is greater than negative twenty-nine]} \quad x > -7$$

$$-9 < -\frac{1}{3}x + 4 \text{ [negative nine is less than negative one-third } x \text{ plus four]} \quad x < 13/2 \text{ or } 6.5$$

$$0 > 10 - \frac{1}{4}x \text{ [two is greater than fifteen minus one-fourth } x]} \quad x > 52$$

$$.4x - 5 < 23 \text{ [four } x \text{ minus five is less than twenty-three]} \quad x < 7$$

Extras:

$$.13 < 4x - 43 \text{ [thirteen is less than four } x \text{ minus forty-three]} \quad x > 14$$

$$.3x + 7 > 19 \text{ [three } x \text{ plus seven is greater than nineteen]} \quad x > 4$$

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QUARTER 4
LIGHTNING ROUND**

Literature: Titles by Characters and Authors

Directions: I will name a character and the author who created that character. You name the title of the work in which that character appears.

Jim Conklin—Stephen Crane	<i>The Red Badge of Courage</i>
Becky Sharp—William Makepeace Thackeray	<i>Vanity Fair</i>
Arthur—Alfred Lord Tennyson	<i>Idylls of the King</i>
Mr. Holgrave—Nathaniel Hawthorne	<i>The House of the Seven Gables</i>
Raymond Winterspoon—Sinclair Lewis	<i>Main Street</i>
Floyd Knowles—John Steinbeck	<i>The Grapes of Wrath</i>
Katrina Van Tassel—Washington Irving	<i>The Legend of Sleepy Hollow</i>
Tiny Soderball—Willa Cather	<i>My Antonia</i>
Elen Coldfield—William Faulkner	<i>Absalom, Absalom!</i>
. Santiago—Ernest Hemingway	<i>The Old Man and the Sea</i>

Extras:

. Starbuck—Herman Melville	<i>Moby Dick</i>
. Marmaduke Temple—James Fenimore Cooper	<i>The Pioneers</i>

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QUARTER 4
LIGHTNING ROUND**

Ancient Egypt

Directions: From the information given, name each of the following people, places or terms associated with Ancient Egypt.

Tall, pointed stone pillars such as those built by Thutmose III	Obelisks
Capital city of Old Kingdom Egypt	Memphis
God of the afterlife and mummification	Anubis
Site of the three Great Pyramids	Giza
Burial place of the New Kingdom pharaohs	Valley of the Kings
Designer of the Step Pyramid	Imhotep
Capital city of New Kingdom Egypt	Thebes
First pharaoh to conquer Syria and Palestine	Thutmose III
Reed used by the Egyptians to make paper	Papyrus
.First pharaoh and founder of the first dynasty	Menes or Narmer

Extras:

.Egyptian sun god worshipped at Heliopolis	Ra
.Pharaoh associated with Hebrew Exodus from Egypt	Ramses II

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Extra Questions

1. This series of conflicts, spanning from 1803 to 1815, saw France, led by Napoleon Bonaparte, fighting against various coalitions of European powers. Key battles include Austerlitz, Leipzig, and Waterloo, where Napoleon was ultimately defeated. What is the name of these early 19th-century wars?

Answer: Napoleonic Wars

2. This 1993 comedy film follows a struggling actor who disguises himself as an elderly British nanny to spend time with his children after a divorce. Starring Robin Williams and directed by Chris Columbus, what is the title of this beloved family movie?

Answer: *Mrs. Doubtfire*

3. This 1965 nonfiction book exposed safety issues in the American auto industry, particularly criticizing the Chevrolet Corvair for its design flaws. Written by an activist who advocated for consumer rights, it led to significant automotive safety reforms. What is this book by Ralph Nader?

Answer: *Unsafe at Any Speed*

4. This genetic condition occurs when an organism has more than two complete sets of chromosomes, often resulting from errors during cell division or hybridization. Common in plants, it can lead to larger size and increased resilience. What is this chromosomal abnormality called?

Answer: Polyploidy

5. This 2018 video game has been described as an interactive movie and was written and directed by the controversial David Cage, who made *Heavy Rain* and *Beyond Two Souls*. What is this game where the player is able to make choices that determine the fate of androids in their fight for freedom from humanity?

Answer: *Detroit: Become Human*

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6. This 30th U.S. President, known for his quiet demeanor, assumed office in 1923 after President Warren Harding's death. He supported limited government, tax cuts, and economic prosperity during the "Roaring Twenties." Who is this leader, nicknamed "Silent Cal"?

Answer: Calvin Coolidge

7. **Math Computation:** Convert the decimal 0.27 repeating into a fraction in lowest terms.

Answer: 3/11

8. This 1859 historical novel is set during the French Revolution and follows the intertwined lives of Charles Darnay, a French aristocrat, and Sydney Carton, a disillusioned lawyer. Famous for its opening line, "It was the best of times, it was the worst of times." What is this work by Charles Dickens?

Answer: *A Tale of Two Cities*

9. **Math Computation:** What is the horizontal asymptote of the following rational function? $f(x) = (5x^2 + 7x + 20) / (4x^2 - 2x + 15)$ [read: F of x equals the quantity 5 x squared plus 7x plus 20 end quantity over the quantity 4 x squared minus 2x plus 15 end quantity].

Answer: 5/4

10. This genetic phenomenon occurs when the expression of one gene is influenced or masked by one or more other genes. For example, in coat color inheritance in certain animals, one gene may suppress the effect of another. What is this form of gene interaction called?

Answer: Epistasis

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QUARTER 1
TOSS-UP QUESTIONS

1. This outermost layer of the Earth consists of the crust and the uppermost mantle, forming rigid tectonic plates that move over the more fluid asthenosphere below. It is responsible for geological phenomena like earthquakes and mountain formation. What is this layer called?

Answer: Lithosphere

2. **Science computation:** A sailboat is being sailed at 2 miles per hour across a river, while the current pushes the sail boat downstream at a speed of 1.5 miles per hour. What is the resultant speed of the sail boat in miles per hour?

Answer: 2.5 mph

3. This region of the brain, situated at the top and rear of the cerebral cortex, processes sensory input like touch, pressure, and temperature. It also contributes to spatial reasoning, coordination, and understanding physical relationships between objects. What is this essential brain lobe called?

Answer: Parietal Lobe

4. **Math Computation:** Convert the polar coordinates $(6, \pi/4)$ [read: 6 comma pi over 4] into rectangular coordinates. Express your answer as (x, y) [read: x comma y].

Answer: $(3\sqrt{2}, 3\sqrt{2})$ [read: 3 radical (square root of) 2 comma 3 radical 2]

5. This West African nation, the most populous in Africa, gained independence from British rule in 1960. It is known for its diverse cultures, oil-rich economy, and major cities like Lagos and Abuja. What is the name of this country bordered by Niger and Cameroon?

Answer: Nigeria

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QUARTER 1
TOSS-UP QUESTIONS

6. This 1963 children's book follows Max, a mischievous boy who is sent to his room and imagines sailing to an island inhabited by wild creatures. After taming them and becoming their king, he leads a wild rumpus before returning home. What is this story by Maurice Sendak?

Answer: *Where the Wild Things Are*

7. **Math Computation:** A quadrilateral has vertices at (3, -4), (6, -2), (8, 1) and (3, 5). What are the coordinates of the quadrilateral if it is reflected over the y-axis?

Answer: (-3, -4), (-6, -2), (-8, 1) and (-3, 5)

8. This 1978 peace agreement was brokered by U.S. President Jimmy Carter between Egyptian President Anwar Sadat and Israeli Prime Minister Menachem Begin. Signed at the presidential retreat in Maryland, it led to Egypt recognizing Israel and Israel withdrawing from the Sinai Peninsula. What is this historic accord called?

Answer: Camp David Accords

9. This artistic style, which emerged in 17th-century Europe, is characterized by dramatic use of light and shadow, elaborate detail, and emotional intensity. It influenced architecture, painting, music, and sculpture, with notable figures including Caravaggio, Bernini, and Bach. What is this period of art called?

Answer: Baroque

10. This French fur trader and diplomat played a significant role in developing trade between French settlers and Native American tribes in the Louisiana Territory. He co-founded the town of Salina and established strong relations with the Osage Nation. Who is this early frontier leader?

Answer: Jean-Pierre Chouteau

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QUARTER 1
TOSS-UP QUESTIONS**

11. This novel, set in 17th-century Puritan Massachusetts, tells the story of Hester Prynne, who is publicly shamed and forced to wear a symbol of her sin after giving birth to a child out of wedlock. Written by Nathaniel Hawthorne, what is this classic American novel?

Answer: *The Scarlet Letter*

12. This astrophysical phenomenon occurs when an object approaches a black hole and is stretched into a long, thin shape due to intense gravitational forces. The difference in gravitational pull between the object's near and far sides causes this extreme distortion. What is this process called?

Answer: Spaghettification

13. **Math Computation:** Subtract 14.4 from 23.042

Answer: 8.642

14. This 1991 memoir follows three generations of Chinese women: the author Jung Chang, her Communist mother, and her grandmother, who was a warlord's concubine. It covers events such as the Japanese invasion, the rise of Mao Zedong, and the Cultural Revolution. What is this acclaimed work by Jung Chang?

Answer: *Wild Swans*

15. This action-packed video game series, first released in 2004, lets players experience large-scale battles in the *Star Wars* universe, with modes allowing them to fight as soldiers, pilots, or iconic heroes and villains. Developed by Pandemic Studios and later DICE, what is this video game franchise?

Answer: *Star Wars: Battlefront*

16. This thick band of nerve fibers connects the left and right hemispheres of the brain, allowing communication between them. It plays a crucial role in coordinating sensory, motor, and cognitive functions. Damage to this structure can result in "split-brain" syndrome. What is this brain structure called?

Answer: Corpus callosum

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QUARTER 1
TOSS-UP QUESTIONS**

17. In 2024, parts of these two Ukrainian regions were left without power after Russian airstrikes damaged critical infrastructure. Which northeastern and central Ukrainian regions faced emergency power cuts due to the attacks?

Answer: Sumy and Poltava

18. This 421 BCE treaty was signed during the Peloponnesian War between Athens and Sparta, intended to last for 50 years. Despite this agreement, hostilities resumed within a few years, leading to renewed conflict. What is the name of this temporary peace accord?

Answer: Peace of Nicias

19. This American singer-songwriter and composer, born in 1943, is known for his satirical songs like "Short People" and "Political Science" and for scoring films such as *Toy Story*, *Monsters, Inc.*, and *A Bug's Life*. A master of orchestration, he has won multiple Academy Awards and Grammy Awards. Who is he?

Answer: Randy Newman

20. This 1900 short story collection portrays the grim realities of war, drawing from the author's experiences as a journalist during the Spanish-American War. The stories, including "The Price of the Harness" and "The Reluctant Heroes," depict the courage and suffering of soldiers. What is this work by Stephen Crane?

Answer: *Wounds in the Rain*

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QUARTER 2
LIGHTNING ROUND**

Pop Culture: 1974 Billboard Top 100 Songs

Directions: Given the Title of a song from Billboard Top 100 songs of 1974, name the artist or group that performed it.

<i>Kung Fu Fighting</i>	Carl Douglas
<i>Bennie and the Jets</i>	Elton John
<i>Jungle Boogie</i>	Kool & The Gang
<i>Feel Like Makin' Love</i>	Roberta Flack
<i>Nothing From Nothing</i>	Billy Preston
<i>You Ain't Seen Nothing Yet</i>	Bachman-Turner Overdrive
<i>Come and Get Your Love</i>	Redbone
<i>Dancing Machine</i>	The Jackson 5
<i>The Loco-Motion</i>	Grand Funk
<i>. Sunshine on My Shoulders</i>	John Denver
Extras:	
<i>. Hooked on a Feeling</i>	Blue Swede
<i>. Band on the Run</i>	Paul McCartney & Wings

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QUARTER 2
LIGHTNING ROUND**

Fine Arts: Greek Gods and Titans

Directions: Given a brief description, identify the Greek gods, goddesses, or Titans.

- The goddess of marriage and queen of the gods. Hera
- The primordial god of the sky, father of the Titans. Ouranos
- The Titan who gave fire to humanity, punished by Zeus. Prometheus
- The god of sleep, often depicted with wings on his head. Hypnos
- The goddess of victory, often seen accompanying Zeus or Athena. Nike
- The god of dreams, son of Hypnos. Morpheus
- The Titan of the sun, who drives a chariot across the sky. Helios
- The goddess of discord and strife, whose apple sparked the Trojan War Eris
- The god of fear, son of Ares and Aphrodite. Phobos
- . The Titan of time, often depicted with a sickle, father of Zeus. Cronus

Extras:

- . The goddess of dawn, sister of Helios and Selene. Eos
- . The god of old age, often depicted as a decrepit old man. Geras

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QUARTER 2
LIGHTNING ROUND**

Pop Culture: 1994 Films

Directions: Given a brief description, name the following films released in 1994.

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A man who is falsely accused spends decades in prison.	<i>The Shawshank Redemption</i>
Criminals, a diner, and a briefcase converge in Los Angeles.	<i>Pulp Fiction</i>
A mentally handicapped man influences key events in history.	<i>Forrest Gump</i>
An exiled feline prince must reclaim his throne from his uncle.	<i>The Lion King</i>
An oddball investigator searches for a stolen football mascot.	<i>Ace Ventura: Pet Detective</i>
A covert operative juggles marriage woes and a terrorist plot.	<i>True Lies</i>
A bomb-rigged bus must stay above 50 mph or disaster ensues.	<i>Speed</i>
Two dim friends embark on a quest to return lost luggage.	<i>Dumb and Dumber</i>
Erik Draven is resurrected from the grave to seek vengeance	<i>The Crow</i>
. Two convenience store workers endure a hilariously offbeat day at their convenience store.	<i>Clerks</i>

Extras:

. An actress is haunted by her film's villain come-to-life.	<i>New Nightmare</i>
. A murderous couple's crime spree is glamorized by the media.	<i>Natural Born Killers</i>

**QUARTER 3
TOSS-UP QUESTIONS**

21. This Egyptian port city lies at the northern end of a gulf that leads into the Red Sea and serves as the southern gateway to a vital waterway completed in 1869, connecting the

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Mediterranean Sea to the Red Sea. A key center for shipping and trade, it gained attention during a 1956 crisis involving nationalization efforts. What is this city called?

Answer: Suez

22. This cognitive framework helps individuals organize and interpret information based on past experiences and knowledge. It influences how new information is understood, categorized, and remembered. Often used in fields like psychology and education, what is this mental structure that guides perception and learning called?

Answer: Schema

23. This leader was the first European to land in Mexican territory. His reports prompted the Spanish governor of Cuba to send a larger force under Hernán Cortés. He was later killed during a battle with Mayan warriors. He explored the Yucatán Peninsula in 1517. Who was this initial explorer?

Answer: Francisco Hernández de Córdoba

24. **Math Computation:** Multiply the following 2 binomials together and simplify the answer: $(3 - 7i)(3 + i)$ [read: the quantity 3 minus 7i times the quantity 3 plus i]. Put your answer in A + B-i form.

Answer: 16 - 18i

25. This 1943 meeting during World War II brought together Allied leaders Franklin D. Roosevelt, Winston Churchill, and Joseph Stalin to plan the final strategy against Nazi Germany. Key discussions included the invasion of Western Europe and post-war territorial arrangements. What is this historic conference called?

Answer: Tehran Conference

QUARTER 3
TOSS-UP QUESTIONS

26. **Math Computation:** Simplify: $\log(64)1024$ [read: log base 64 of 1024].

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Answer: 5/3

27. These organisms break down dead organic matter into simpler substances, recycling nutrients back into the ecosystem. Common examples include bacteria, fungi, and certain types of insects. They play a crucial role in maintaining soil health and the flow of energy in food webs. What are these organisms called?

Answer: Decomposers

28. This short story revolves around the search for the hidden treasure of the notorious pirate Captain Kidd. Set on Sullivan's Island, South Carolina, it is filled with cryptographic puzzles and mysterious clues. The story, published in 1843, is one of the writer's earliest detective tales. Name this story by Edgar Allan Poe.

Answer: *The Gold Bug*

29. This amendment to the U.S. Constitution, ratified in 1791, was a response to colonial grievances under British rule and reinforces the right to privacy. What amendment prohibits the quartering of soldiers in private homes during peacetime without the homeowner's consent?

Answer: Third Amendment

30. This 1997 novel follows Seymour "Swede" Levov, a successful Jewish-American businessman whose idyllic life unravels when his daughter becomes involved in political violence during the 1960s. What is this Pulitzer Prize-winning work by Philip Roth?

Answer: *American Pastoral*

**QUARTER 3
TOSS-UP QUESTIONS**

31. This 17th-century Spanish painter, known for his mastery of realism and portraiture, served as the court painter to King Philip IV of Spain. His most famous work, *Las*

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Meninas, is celebrated for its complex composition and perspective. Who is this renowned Baroque artist?

Answer: Diego Velázquez

32. This 1729 satirical essay suggests an outrageous solution to poverty and overpopulation in Ireland: that impoverished families sell their children as food to the wealthy. Written as a critique of British exploitation and indifference, what is this famous work by Jonathan Swift called?

Answer: *A Modest Proposal*

33. This American author, a World War II veteran and former prisoner of war, was born in 1922 in Indianapolis. He drew from his experiences in *Slaughterhouse-Five*. His other notable works include *Cat's Cradle* and *Breakfast of Champions*. Who is this celebrated novelist?

Answer: Kurt Vonnegut

34. In 2024, a European spacecraft and CubeSats were launched to assess whether NASA's DART mission, conducted in September 2022, successfully altered the path of an asteroid. What is the name of the asteroid deflected by NASA's DART mission?

Answer: Dimorphos

35. **Math Computation:** What is the derivative of y , with respect to x , at $x = 4$, if: $y = 3x^3 + 4x - 9$ [read: y equals $3x$ cubed plus $4x$ minus 9]?

Answer: 148

QUARTER 3
TOSS-UP QUESTIONS

36. This 2024 film is the fifth in a franchise that has been ongoing since 1979, and is the prequel to a 2015 film subtitled Fury Road. What is this prequel that stars

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Anya Taylor Joy as the titular heroine, a character that was previously portrayed by Charlize Theron?

Answer: *Furiosa: A Mad Max Saga*

37. This naturally occurring inorganic substance has a definite chemical composition and a crystalline structure. Found in various environments, it forms through geological processes and is classified based on properties such as hardness, luster, and cleavage. What is this fundamental component of rocks called?

Answer: Mineral

38. This small, portable wind instrument produces sound when the player exhales or inhales through chambers, each containing a reed that vibrates to create different pitches. Often used in blues, folk, and rock music, it can produce both single notes and chords. What is this instrument, also known as a mouth organ, called?

Answer: Harmonica

39. This chemical reaction occurs when water molecules are added to a substance, often altering its structure or breaking bonds. In organic chemistry, it commonly involves converting alkenes into alcohols. What is this reaction called?

Answer: Hydration reaction

40. **Science Computation:** What orbital shell is filled after filling the 3d orbital?
Remember to use the Madelung or diagonal rule of the Aufbau principle.

Answer: 4p

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QUARTER 4
LIGHTNING ROUND**

Math - Geometric Mean

Directions: Calculate the geometric mean between the following pairs of numbers.

Total 1: _____ Total 2: _____

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10 and 40	20
14 and 56	28
18 and 72	36
24 and 96	48
8 and 32	16
20 and 80	40
6 and 24	12
5 and 45	15
$3\sqrt{3}$ and $27\sqrt{3}$	$9\sqrt{3}$
$.12\sqrt{2}$ and $48\sqrt{2}$	$24\sqrt{2}$

Extras:

$.4\sqrt{5}$ and $16\sqrt{5}$	$8\sqrt{5}$
$.6\sqrt{11}$ and $24\sqrt{11}$	$12\sqrt{11}$

**QUARTER 4
LIGHTNING ROUND**

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Social Studies: African Capitals

Directions: Given the name of an African country, name the capital.

Cameroon	Yaoundé
Burkina Faso	Ouagadougou
Madagascar	Antananarivo
Ethiopia	Addis Ababa
Kenya	Nairobi
Eritrea	Asmara
Nigeria	Abuja
Sudan	Khartoum
Seychelles	Victoria
Mauritania	Nouakchott

Extras:

. Benin	Porto Novo
. Somalia	Mogadishu

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QUARTER 4
LIGHTNING ROUND**

Social Studies: U.S. Governors

Directions: Given the name of a U.S. State Governor, name the state. All answers are current as of the 2024 election.

Josh Shapiro	Pennsylvania
Phil Murphy	New Jersey
Josh Stein	North Carolina
Bill Lee	Tennessee
Jim Justice	West Virginia
Jared Polis	Colorado
Michelle Lujan Grisham	New Mexico
Kay Ivey	Alabama
Sarah Huckabee Sanders	Arkansas
.Joe Lombardo	Nevada

Extras:

.Mike Parson	Missouri
.Eric Holcomb	Indiana

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Extra Questions

1. This 1977 novel follows Macon "Milkman" Dead III as he uncovers his family's past, learning about his ancestor Solomon, who escaped slavery by flying back to Africa. Key characters include Pilate, his independent aunt, and Guitar, his childhood friend turned adversary. What is this work by Toni Morrison?

Answer: *Song of Solomon*

2. This astronomical phenomenon occurs when a light source moves toward an observer, causing the wavelengths of the emitted light to become shorter and appear in the blue portion of the spectrum. It is commonly observed in approaching stars or galaxies. What is this effect called?

Answer: Blueshift

3. This 1952 test demonstrated the immense power of thermonuclear weapons, marking a significant escalation in the nuclear arms race. It was the first successful detonation of a hydrogen bomb, conducted by the United States on Enewetak Atoll in the Marshall Islands. What was this test called?

Answer: Ivy Mike

4. This 1891 novel tells the story of a young woman from a poor family who learns of her noble ancestry but faces ruin after being seduced by a wealthy man and later abandoned by her husband on their wedding night. Set in rural England, what is this tragic work by Thomas Hardy featuring Tess Durbeyfield?

Answer: *Tess of the D'Urbervilles*

5. This capital city, founded by the Vikings around the 9th century, is known for its literary heritage, historic landmarks such as Trinity College and the Ha'penny Bridge. It is also home to the annual Bloomsday celebration honoring James Joyce. What is the name of this Irish city?

Answer: Dublin

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6. This plant tissue is responsible for transporting sugars and other nutrients produced during photosynthesis from the leaves to other parts of the plant. Unlike its counterpart that moves water and minerals, it consists of sieve tubes and companion cells. What is this vascular tissue called?

Answer: Phloem

7. These stone carvings, in addition to their decorative purpose, served as water spouts to direct rainwater away from building walls. Often depicting grotesque creatures or figures, they were commonly used in medieval architecture, particularly in Gothic cathedrals. What are these architectural features called?

Answer: Gargoyles

8. **Math Computation:** Convert the decimal 0.17 repeating into a fraction in lowest terms.

Answer: 17/99

9. This supervillain is often the main antagonist of the Teenage Mutant Ninja Turtles in both cartoons and movies. Who is this villain, the alter ego of Oroku Saki, who wears bladed armor and leads an evil clan of Ninja called the Foot?

Answer: Shredder

10. **Math Computation:** A card is drawn at random from a standard 52-card deck. What is the reduced probability that it will be a non-face card?

Answer: 10/13

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QUARTER 1
TOSS-UP QUESTIONS

1. This phenomenon occurs when light shining on a metal surface ejects electrons, demonstrating that light can behave as particles known as photons. It provided key evidence for quantum theory and earned Albert Einstein the Nobel Prize in Physics in 1921. What is this effect called?

Answer: Photoelectric Effect

2. This proposal, presented in 1918, outlined a plan for post-World War I peace, emphasizing self-determination, free trade, and the creation of an international organization to resolve conflicts. Drafted by U.S. President Woodrow Wilson, what is this influential diplomatic framework called?

Answer: Fourteen Points

3. **Math Computation:** A \$2000 savings account earns 5% interest. How much will be in the account after 2 years if the interest is compounded annually?

Answer: \$2205

4. This historic royal residence, located in Berkshire, England, is the longest-occupied palace in Europe and a favored weekend retreat of British monarchs. Originally built in the 11th century by William the Conqueror, it remains a symbol of the British monarchy. What is this castle called?

Answer: Windsor Castle

5. This painting technique, developed in the late 19th century by Georges Seurat and Paul Signac, relies on the viewer's eye to blend the colors. It involves applying small, distinct dots of color in carefully arranged patterns to create an image. What is this art style called?

Answer: Pointillism

6. **Math Computation:** The base angle in an isosceles triangle measures 36.4 degrees. What is the measure of the vertex angle in degrees?

Answer: 107.2

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QUARTER 1
TOSS-UP QUESTIONS**

7. This marginal sea of the Arctic Ocean, located north of Norway and Russia, is known for its biodiversity and importance to global fisheries. Named after Dutch navigator Willem Barentsz, it stays partially ice-free year-round due to the North Atlantic Drift. What is this sea called?

Answer: The Barents Sea

8. This 1994 biopic is about one of the most maligned filmmakers of all time. What is this film, directed by Tim Burton, that stars Johnny Depp as an eccentric film director who made multiple low budget films in the 50s?

Answer: *Ed Wood*

9. This 1904 exposé detailed the unethical business practices of a powerful monopoly, documenting how John D. Rockefeller's company eliminated competition and controlled the oil industry. It became a key work in the muckraking movement. What is this influential book by journalist Ida Tarbell?

Answer: *The History of the Standard Oil Company*

10. This 2024 animated series, part of the new cinematic DC Universe, follows a black ops team of monsters assembled by Amanda Waller. The team includes Rick Flag Sr., the Bride, G.I. Robot, Weasel, and others. Developed by James Gunn, it premiered on Max on December 5, 2024. What is this show called?

Answer: *Creature Commandos*

11. This 1915 collection of free-verse poems presents the epitaphs of fictional residents in a small Midwestern town, revealing their secrets, regrets, and intertwined lives from beyond the grave. Written by Edgar Lee Masters, what is this work that captures the complexity of American rural life?

Answer: *Spoon River Anthology*

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QUARTER 1
TOSS-UP QUESTIONS**

12. This teardrop-shaped object, created by dripping molten glass into cold water, has a hardened outer surface and a highly stressed interior. While the bulbous end can withstand powerful impacts, the tail shatters the entire structure when broken. What is this unique glass phenomenon called?

Answer: Prince Rupert's Drop

13. This American author, known for his hard-boiled detective fiction, created iconic characters such as Sam Spade and Nick and Nora Charles. His works, including *The Maltese Falcon* and *The Thin Man*, are considered classics of the genre. Who is this influential writer?

Answer: Dashiell Hammett

14. In which U.S. city did a tragic event on January 1, 2025 take place, involving a man named Shamsud-Din Jabbar driving a pickup truck into a crowd on the corner of Bourbon and Canal St. It resulted in multiple fatalities and injuries, with the FBI investigating it as a terrorist attack?

Answer: New Orleans

15. This narrow waterway, located between eastern Russia and western Alaska, connects the Arctic Ocean to the Bering Sea. It is historically significant as the site of a land bridge during the last Ice Age, enabling human migration to North America. What is this strait called?

Answer: Bering Strait

16. This 17th-century English scientist made significant contributions to physics, astronomy, and biology. He is best known for his work *Micrographia*, in which he coined the term "cell" after observing cork tissue under a microscope. Who is this influential natural philosopher?

Answer: Robert Hooke

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QUARTER 1
TOSS-UP QUESTIONS**

17. Math Computation: Divide the trinomial $2x^2 - 3x - 20$ by the binomial $2x + 5$. [read: 2x squared minus 3x minus 20 by 2 x plus 5]

Answer: $x - 4$

18. This synthetic element was first synthesized in 2003 by a team of Russian and American scientists at the Joint Institute for Nuclear Research. Highly unstable and radioactive, it was named after a Moscow region in Russia. What is this element called, with the atomic number 115?

Answer: Moscovium

19. This term refers to a group of American writers who came of age during World War I and expressed disillusionment with traditional values and society in their works. Figures include Ernest Hemingway, F. Scott Fitzgerald, and Gertrude Stein, many of whom spent time in Paris. What is this term coined by Stein?

Answer: The Lost Generation

20. Math Computation: What is the sum of the infinite geometric series that begins with 12 and has a common ratio of two-thirds?

Answer: 36

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QUARTER 2
LIGHTNING ROUND**

Literature: British Poets and Their Works

Directions: Given the title of a poem by a British author, name the author.

<i>Men and Women</i>	Robert Browning
<i>Ode to a Nightingale</i>	John Keats
<i>On My First Son</i>	Ben Jonson
<i>Paradise Lost</i>	John Milton
<i>The Battle of Blenheim</i>	Robert Southey
<i>The Charge of the Light Brigade</i>	Alfred Lord Tennyson
<i>To a Skylark</i>	Percy Bysshe Shelley
<i>Valediction</i>	John Donne
<i>When I Was One-and-Twenty</i>	A.E. Housman
<i>. The Rape of the Loch</i>	Alexander Pope

Extras:

<i>. The Hawk in the Rain</i>	Ted Hughes
<i>. Lines Written a Few Miles above Tintern Abbey</i>	William Wordsworth

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QUARTER 2
LIGHTNING ROUND**

Fine Arts: Classic Jazz Artists by Song

Directions: Given the title of a well-known classic jazz piece, name the primary composer/performer.

<i>Minnie the Moocher</i>	Cab Calloway
<i>Giant Steps</i>	John Coltrane
<i>Cantaloupe Island</i>	Herbie Hancock
<i>Song for My Father</i>	Horace Silver
<i>So What</i>	Miles Davis
<i>Round Midnight</i>	Thelonious Monk
<i>It Don't Mean a Thing (If It Ain't Got That Swing)</i>	Duke Ellington
<i>A Night in Tunisia</i>	Dizzy Gillespie
<i>Potato Head Blues</i>	Louis Armstrong
. <i>Yardbird Suite</i>	Charlie Parker
Extras:	
. <i>Unsquare Dance</i>	Dave Brubeck
. <i>A-Tisket, A-Tasket</i>	Ella Fitzgerald

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QUARTER 2
LIGHTNING ROUND**

Most Populated Cities by State

Directions: Given a U.S. state, name its most populated city.

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New York	New York City
Virginia	Virginia Beach
Indiana	Indianapolis
Tennessee	Memphis
Nevada	Las Vegas
Oregon	Portland
Colorado	Denver
Massachusetts	Boston
Minnesota	Minneapolis
.Missouri	Kansas City

Extras:

.Wisconsin	Milwaukee
.Alabama	Birmingham

**QUARTER 3
TOSS-UP QUESTIONS**

21. This 1938 Gothic novel follows an unnamed narrator who marries wealthy widower Maxim de Winter and moves to his mansion, Manderley. There, she is haunted by the

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memory of his late first wife whose influence lingers in unsettling ways. What is this novel by Daphne du Maurier?

Answer: *Rebecca*

22. **Math Computation:** A rhombus has diagonals of length 16 and 30. What is the length of each side of the rhombus?

Answer: 17

23. This building, completed in 1956 in Bartlesville, Oklahoma, is the only realized skyscraper by its architect. Originally designed as a "tree that escaped the crowded forest," it features cantilevered floors and a copper facade. Name this structure designed by Frank Lloyd Wright.

Answer: Price Tower

24. In music, this term indicates a tempo, often described as a walking pace, providing a relaxed and steady rhythm. It balances between slow and fast tempos, offering a calm and flowing feel. What is this term used to denote a moderate speed in music?

Answer: Andante

25. This 1992 family comedy film follows a mischievous but lovable St. Bernard who becomes part of the Newton family, despite the chaos he causes. The plot thickens when an evil veterinarian plots to use the dog for cruel experiments. What is this film about a dog, named after a famous composer?

Answer: *Beethoven*

**QUARTER 3
TOSS-UP QUESTIONS**

26. Often used in stoichiometry, this number represents the amount of substance that contains as many atoms, molecules, ions, etc as there are atoms in exactly

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12 grams of carbon-12. What is the name of this unit, which is approximately 6.022×10^{23} ?

Answer: Mole

27. This section of the U.S. Constitution was created to protect individual liberties and rights of American citizens. It includes freedoms such as speech, assembly, and religion. Ratified in 1791, what are the first ten amendments to the U.S. Constitution called?

Answer: The Bill of Rights

28. This rare, branching pattern appears on the skin of individuals struck by lightning, resembling a fern-like or tree-like design. Caused by the passage of high-voltage electricity, it's a temporary mark created by the discharge path and ionization of the skin. What is this phenomenon called?

Answer: Lichtenberg Scarring

29. This 19th-century American poet, born in Portland, Maine, was a professor at Harvard University and became known for his mastery of narrative poetry. He suffered personal tragedy when his second wife died in a fire. His works include *Evangeline* and *The Song of Hiawatha*. Who is he?

Answer: Henry Wadsworth Longfellow

30. **Math Computation:** Convert an angle of 495 degrees into radians and reduce completely, leaving pi in the answer.

Answer: $11/4 \pi$ (or 11 pi over 4)

QUARTER 3
TOSS-UP QUESTIONS

31. This subtitle of the first sci-fi novel alludes to the Greek mythological figure who defied the gods by giving fire to humanity. It references creation, hubris, and

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unintended consequences, as the doctor brings his creature to life with tragic results. What is the subtitle of the novel Frankenstein?

Answer: "The Modern Prometheus"

32. **Math Computation:** What is the determinant of the matrix which has elements 18 and 13 top row left to right and elements 6 and negative 4 bottom row left to right?

Answer: -150

33. This U.S. Secretary of the Interior was implicated in the Teapot Dome scandal, where he accepted bribes for leasing Navy petroleum reserves to private oil companies. His actions led to one of the most infamous corruption cases in American history. Who is this official convicted in 1929?

Answer: Albert Bacon Fall

34. This term refers to the angular measurement in a spherical coordinate system that defines the horizontal direction of an object from an observer. Measured in degrees from a reference point, such as true north, it is commonly used in astronomy, navigation, and surveying. What is this term called?

Answer: Azimuth

35. This 2009 young adult historical fantasy novel, set in feudal Japan, follows Taro, a fisherman's son who learns he is a vampire after surviving a deadly attack. Trained by ninja warriors, he uncovers secrets about his lineage and faces the ruthless warlord Oda. What is this novel by Nick Lake called?

Answer: *Blood Ninja*

**QUARTER 3
TOSS-UP QUESTIONS**

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36. This anonymous street artist from the United Kingdom has gained international fame for his provocative and socially conscious graffiti. His works often appear suddenly in public spaces and critique contemporary societal issues. Who is the artist behind the famous artwork *Girl with Balloon*?

Answer: Banksy

37. This U.S. program, initiated during the Cold War, aimed to explore the peaceful applications of nuclear explosions, such as excavation, mining, and canal construction. Experiments like the Sedan nuclear test demonstrated its potential but raised environmental and safety concerns. What was this controversial program called?

Answer: Project Plowshare

38. **Math Computation:** A trapezoid has bases of 23.6 and 54.7. What is the length of the median of the trapezoid?

Answer: 39.15

39. This country conducted large-scale military drills around a nearby island in 2024, deploying fighter jets, warships, and Coast Guard vessels to simulate a blockade. The drills were part of ongoing pressure on Taiwan. Which nation carried out these exercises in the Taiwan Strait?

Answer: China

40. These plants have adapted to nutrient-poor environments by trapping and digesting small animals, typically insects, to obtain essential nutrients like nitrogen. Examples include the Venus flytrap, pitcher plants, and sundews. What are these specialized plants known as?

Answer: Carnivorous plants

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QUARTER 4
LIGHTNING ROUND**

MATH - Distance Formula

Directions: Directions: Find the distance between each pair of given points. If necessary, express your answer as a simplified radical. [Moderator – read (1,2) as one comma two.]

(3,4) and (6,8)	5
(-3,-1) and (5,5)	10
(2,1) and (7,11)	$5\sqrt{5}$
(-2,3) and (4,-2)	$\sqrt{61}$
(3,0) and (-6,0)	9
(-1,5) and (4,-3)	$\sqrt{89}$
(-6,-8) and (6,4)	$12\sqrt{2}$
(10,14) and (4,8)	$6\sqrt{2}$
(5,7) and (-7,1)	$6\sqrt{5}$
.(2,-4) and (-7,3)	$\sqrt{130}$

Extras:

.(4,-5) and (5,2)	$5\sqrt{2}$
.(-7,6) and (9,-2)	$8\sqrt{5}$

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QUARTER 4
LIGHTNING ROUND**

U.S. Presidents by Historical Event

Directions: Given the historical event, name the president in office during the event

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The signing of the Emancipation Proclamation	Abraham <u>Lincoln</u>
The stock market crash of 1929	Herbert <u>Hoover</u>
The attack on Pearl Harbor	<u>Franklin D. Roosevelt</u>
The moon landing in 1969	Richard <u>Nixon</u>
The signing of the Civil Rights Act of 1964	<u>Lyndon B. Johnson</u>
The Cuban missile crisis	John F. <u>Kennedy</u>
The end of the Vietnam War	Gerald <u>Ford</u>
The fall of the Berlin Wall	George <u>H. W. Bush</u>
The September 11 attacks	George <u>W. Bush</u>
.The signing of the Affordable Care Act	Barack <u>Obama</u>

Extras:

.The Louisiana Purchase	Thomas <u>Jefferson</u>
.The Camp David Accords	Jimmy <u>Carter</u>

**QUARTER 4
LIGHTNING ROUND**

Science: Inventors and their Inventions

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Directions: Given a famous invention, name the person or persons who invented it.

Light Bulb	Thomas Edison
Telephone	Alexander Graham Bell
Airplane	Orville & Wilbur Wright
Printing Press	Johannes Gutenberg
Automobile (modern)	Karl Benz
Polio Vaccine	Jonas Salk
Dynamite	Alfred Nobel
Steam Engine (commercial)	James Watt
Morse Code	Samuel Morse
.Radio	Guglielmo Marconi

Extras:

.Safety Elevator	Elisha Otis
.World Wide Web	Tim Berners-Lee

Extra Questions

1. This 1996 platforming game was released on the Playstation, and is considered one of the worst games of all time. What is this 3D platforming game, the fourth

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in a series that features a bobcat mascot, and is known for its poor controls, camera, graphics, and technical issues?

Answer: *Bubsy 3D*

2. **Math Computation:** Convert an angle of 13π over 4 radians into an equivalent angle in degrees.

Answer: 585

3. This large area of low-pressure, cold air typically surrounds the Earth's poles and strengthens during the winter months. When it weakens, frigid air can shift southward, causing extreme cold in mid-latitude regions. What is this atmospheric phenomenon called?

Answer: Polar vortex

4. This musical term refers to a combination of three or more notes played simultaneously to create harmony. Common types include major, minor, diminished, and augmented, each evoking a different emotional tone. What is this fundamental element of music theory called?

Answer: Chord

5. This 19th-century U.S. naval officer and historian is renowned for his influential work *The Influence of Sea Power upon History, 1660–1783*, which argued that naval dominance was crucial to national power, military success, and global influence. Who is this prominent military strategist?

Answer: Alfred T. Mahan

6. This digital animation technique uses vector-based graphics and became popular in the late 1990s and early 2000s for creating web animations and interactive content. Which technique was widely used in early internet cartoons like "Homestar Runner" and "Happy Tree Friends"?

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Answer: Flash Animation

7. **Math Computation:** Simplify $\sqrt{578}$ [radical 578] into simplest form.

Answer: $17\sqrt{2}$ [17 radical 2 or 17 times the square root of 2]

8. This branch of chemistry studies the rates of chemical reactions and the factors that affect them, such as temperature, concentration, and catalysts. It also examines reaction mechanisms to understand how reactants transform into products. What is this field of chemistry called?

Answer: Chemical kinetics

9. This 1949 memoir tells the story of the author's teenage son, Johnny, who battled a fatal brain tumor with remarkable resilience and courage. What is this work by John Gunther called?

Answer: Death be Not Proud

10. This Caribbean island and U.S. territory is known for its rich cultural heritage, tropical climate, stunning beaches, and landmarks like El Yunque National Forest and Old San Juan. Acquired by the U.S. in 1898 after the Spanish-American War, what is the name of this island?

Answer: Puerto Rico

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STATE GAME 7**

**QUARTER 1
TOSS-UP QUESTIONS**

1. This significant Civil War battle in Indian Territory was a key Union victory and was notable because Native Americans made up a significant portion of each side. What is this 1863 battle that prevented Confederate forces from reclaiming Fort Gibson and marked a turning point in the Union's campaign in the region?

Answer: Battle of Honey Springs

2. This 1928 anthropological study explores the daily lives and social customs of adolescents in a Pacific island society. Based on fieldwork conducted in the Samoan Islands, it offers insights into cultural differences in aging experiences. What is this work by Margaret Mead called?

Answer: *Coming of Age in Samoa*

3. This British ocean liner was attacked during World War I, contributing to rising tensions between the U.S. and Germany and influencing public opinion about entering the war. The ship was sunk by a German U-boat on May 7, 1915, with over 1,000 lives lost. What was the name of this ship?

Answer: Lusitania

4. **Math Computation:** What is the area, in square feet and in terms of pi, of a circle that has a circumference of 36π feet?

Answer: 324π

5. This brain structure, located in the temporal lobe, plays a critical role in learning and memory formation, particularly in converting short-term memories into long-term ones. It is also associated with spatial navigation. What is this structure, named after its resemblance to a seahorse?

Answer: Hippocampus

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STATE GAME 7
QUARTER 1
TOSS-UP QUESTIONS**

6. This monarch, who ascended to the British throne in 2023 following the death of his mother, has long been known for his environmental advocacy and work with the Prince's Trust. Known as Duke of Cornwall and Prince of Wales, the latter of which he held for over 60 years. Who is this current British king, the first to reign after Queen Elizabeth II?

Answer: King Charles III

7. This Russian composer, pianist, and conductor, known for his virtuosic piano compositions, created works such as *Piano Concerto No. 2* and *Rhapsody on a Theme of Paganini*. After the Russian Revolution, he emigrated to the United States and gained international fame. Who is this musician?

Answer: Sergei Rachmaninoff

8. **Math Computation:** Two secant lines intersect outside a circle. If the intercepted arcs from these lines measure 98 and 73 degrees, what is the measure, in degrees, of the angle formed by these secants?

Answer: 12.5 or 25/2

9. This annual publication, first released in 1732 by Benjamin Franklin under the pseudonym "Richard Saunders," included weather forecasts, practical advice, and humorous proverbs like "Early to bed and early to rise makes a man healthy, wealthy, and wise." What is the name of this famous almanac?

Answer: Poor Richard's Almanac

10. **Science Computation:** An atom of gold has an atomic number of 79 and a mass number of 197. How many neutrons are present in one atom of silver?

Answer: 118

11. This Republican politician crafted a funding package to avoid a government shutdown during the 2024 holiday season. Who is this Republican, the current Speaker of the House who replaced Kevin McCarthy?

Answer: Mike Johnson

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STATE GAME 7
QUARTER 1
TOSS-UP QUESTIONS**

12. This condition increases the risk of fractures, particularly in the hip, spine, and wrist. It involves a decrease in bone mineral density, leading to porous and fragile bones. What is this skeletal disorder that requires attention to diet, exercise, and possibly medication to prevent bone loss?

Answer: Osteoporosis

13. **Math Computation:** Solve the following inequality to find H: $7H + 5 > 82$ [read: 7H plus 5 is greater than 82].

Answer: H is greater than 11 (or 11 is less than H)

14. This clause in the U.S. Constitution requires states to recognize the public acts, records, and judicial proceedings of all other states, promoting legal consistency and cooperation across state lines. This clause is found in Article IV of the Constitution and was ratified in 1787. What is this clause called?

Answer: The Full Faith and Credit Clause

15. This term describes the role of an actor chosen to replace another actor in the event of illness or absence, often trained in multiple roles. What is this position called, vital to ensuring performances go on smoothly?

Answer: Understudy

16. This 1993 drama film got Leonardo DiCaprio his first Oscar nomination for his portrayal of a boy with autism. What is this film, directed by Lasse Hallstrom, that stars Johnny Depp as the eldest brother and caretaker of a poor family who face many issues?

Answer: What's Eating Gilbert Grape

17. This powerful governing body of the Catholic Church consists of senior officials appointed by the Pope, who also select the Pope's successor. In 2024, Pope Francis appointed 21 new members from around the world, including Iran. What is this group called?

Answer: Cardinals

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STATE GAME 7
QUARTER 1
TOSS-UP QUESTIONS**

18. This 1953 memoir chronicles the historic 1927 solo transatlantic flight from New York to Paris by its author, offering a detailed account of the physical and mental challenges faced during the 33-hour journey in a single-engine monoplane. Written by the aviator himself, what is this Pulitzer Prize-winning book by Charles Lindbergh called?

Answer: *The Spirit of St. Louis*

19. This physicist expanded upon Max Planck's 1900 discovery that the energy of a photon is proportional to the frequency of its light. In 1905, he used the concept of photons to explain the photoelectric effect, demonstrating how light could eject electrons from metallic surfaces. Who was this scientist?

Answer: Albert Einstein

20. This series of programs and reforms, launched in response to the Great Depression, aimed to provide economic relief, recovery, and reform. Initiated by President Franklin D. Roosevelt, it established agencies like the CCC, WPA, and Social Security. Name this transformative set of policies from the 1930s.

Answer: The New Deal

Total 1: _____ Total 2: _____

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STATE GAME 7
QUARTER 2
LIGHTNING ROUND**

Social Studies: U.S. States by Senator

Directions: Given a U.S. State Senator, name the state. All answers are current as of the 2024 election.

Total 1: _____ Total 2: _____

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Raphael Warnock	Georgia
Chris Van Hollen	Maryland
Cory Booker	New Jersey
John Fetterman	Pennsylvania
Bill Hagerty	Tennessee
Mazie Hirono	Hawaii
Maria Cantwell	Washington
Jeff Merkley	Oregon
Chris Coons	Delaware
. Sheldon Whitehouse	Rhode Island

Extras:

. Eric Schmitt	Missouri
. Lindsey Graham	South Carolina

**QUARTER 2
LIGHTNING ROUND**

Social Studies: U.S. Historical Documents and Policies

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Directions: Identify the historical document or policy from the description.

- | | |
|---|---------------------------|
| 1787; Created America's first organized territories. | Northwest Ordinance |
| 1820; Admitted Missouri as a slave state, Maine as a free state. | Missouri Compromise |
| 1783; Ended the American Revolution and recognized U.S. independence. | Treaty of Paris |
| 1823; Declared opposition to European colonialism in the Americas. | Monroe Doctrine |
| 1863; Freed slaves in Confederate states during the Civil War. | |
| 1862; Provided 160 acres of land to settlers for a small fee. | Emancipation Proclamation |
| 1863; Lincoln's speech honoring fallen soldiers and emphasizing equality. | Homestead Act |
| 1866; Granted citizenship and equal protection to African Americans. | Gettysburg Address |
| 1854; Allowed settlers to vote on slavery in new territories. | Civil Rights Act |
| . 1850; Required the return of escaped servants, even from free states. | Kansas-Nebraska Act |
| | Fugitive Slave Act |

Extras:

- | | |
|---|-----------------------------|
| . 1848; Ended the Mexican-American War | |
| | Treaty of Guadalupe Hidalgo |
| . 1814; Ended the War of 1812 between America and Britain | |
| | Treaty of Ghent |

QUARTER 2
LIGHTNING ROUND

Social Studies: Constitutional Amendments

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Directions: Given a brief description, name the U.S. amendment described.

Freedom of speech, religion, and press.	1st
Protection from self-incrimination.	5th
Right to a speedy, public trial.	6th
Right to a jury trial in civil cases.	7th
People's rights not listed in the Constitution.	9th
Powers reserved to the states.	10th
Separate ballots for President and Vice President.	12th
Defines citizenship and equal protection.	14th
Prohibits voting restrictions by race.	15th
. Direct election of senators.	17th

Extras:

. Women's right to vote.	19th
. Repeals prohibition.	21st

QUARTER 3
TOSS-UP QUESTIONS

21. This protective layer surrounds nerve cells, allowing electrical impulses to travel more quickly and efficiently along the nervous system. Composed primarily of

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STATE GAME 7**

lipids, it is produced by Schwann cells in the peripheral nervous system and oligodendrocytes in the central nervous system. Name this insulating structure.

Answer: Myelin Sheath

22. Built around 353 BCE as a monumental tomb for Mausolus, a satrap of the Persian Empire, this structure stood approximately 45 meters tall and was adorned with sculptural reliefs created by four Greek sculptors. What is the name of this Wonder of the Ancient World located on the Gulf of Gökova?

Answer: Mausoleum at Halicarnassus

23. This book popularizes complex scientific concepts like black holes and the Big Bang, making them accessible to a general audience. Written by a physicist known for his work on cosmology and quantum gravity, it was first published in 1988. Name this work by Stephen Hawking.

Answer: *A Brief History of Time*

24. **Science computation:** A plane accelerates from 4.5 meters per second to 32.5 meters per second in 4.0 seconds. What is the average acceleration in meters per second squared, with the correct number of significant digits?

Answer: 7.0

25. This 1958 poetry collection includes the lines "I am waiting for a rebirth of wonder", reflecting mid-20th century life. Its author co-founded City Lights Bookstore and published *Howl*. Name this collection by Lawrence Ferlinghetti.

Answer: *A Coney Island of the Mind*

**QUARTER 3
TOSS-UP QUESTIONS**

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26. Characterized by its pointed arches, ribbed vaults, and flying buttresses, this style of architecture developed during the Middle Ages, reaching its height in the late medieval period. What is this style, which was prevalent in the construction of cathedrals and churches during the Middle Ages?

Answer: Gothic architecture

27. On December 29, 2024, this humanitarian, Nobel Peace Prize laureate, and politician passed away at the age of 100. He was honored with a six-day state funeral beginning in Georgia. Who was this former 39th President of the United States?

Answer: Jimmy Carter

28. This 1949 Broadway musical, composed by Richard Rodgers with lyrics by Oscar Hammerstein II, is set during World War II and follows intertwined love stories against the backdrop of a tropical island. Featuring songs like "Some Enchanted Evening" and "You've Got to Be Carefully Taught," what is this classic musical called?

Answer: *South Pacific*

29. This American businessman was fatally shot on December 4th 2024 outside of a New York City hotel. His shooter is believed to be Luigi Mangione. Who is this man who was the CEO of UnitedHealth Group before his death?

Answer: Brian Thompson

30. **Math Computation:** What is the 6th term of a geometric series that starts with 3 and has a common ratio of 2?

Answer: 96

31. This structure in the retina marks the point where the optic nerve exits the eye and lacks photoreceptors, creating a blind spot in the visual field. What is this structure that serves as a pathway for nerve fibers to transmit signals to the brain?

Answer: Optic Disc

**QUARTER 3
TOSS-UP QUESTIONS**

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STATE GAME 7**

32. This nonfiction work explores the history of horror in literature, film, and television, examining why people are drawn to the genre. Written by an author known for *The Shining* and *Carrie*, it was first published in 1981. Name this book by Stephen King.

Answer: *Danse Macabre*

33. This U.S. Navy admiral was a Commander in Chief of the Pacific Fleet during World War II, overseeing crucial victories such as the Battle of Midway. Who is this admiral who later signed the Japanese Instrument of Surrender aboard the USS Missouri, officially ending the war in the Pacific?

Answer: Chester W. Nimitz

34. **Science Computation:** A metal absorbs 1600 joules of energy to raise 4.00 kilograms of the substance by 2.00 degrees Celsius. What is the specific heat capacity of the metal, in joules per kilogram degree Celsius?

Answer: 200

35. This photography technique involves using a slow shutter speed to capture a scene over an extended period, often resulting in effects like light trails, blurred motion, or smooth water surfaces. Common in night photography and astrophotography, what is this technique called?

Answer: Long Exposure

36. This 1989 comedy stars Weird Al Yankovich in his first starring role in a feature film, and was filmed in Tulsa, Oklahoma. What is this satirical film about a slacker taking over a local access television channel and creating strange programming?

Answer: *UHF*

**QUARTER 3
TOSS-UP QUESTIONS**

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37. This British surgeon in the 1860s worked at the Glasgow Royal Infirmary and was alarmed by high mortality rates from sepsis among his patients. In 1867, he pioneered the use of carbolic acid to sterilize the operating room, surgical instruments, and his hands to prevent infections. Identify this founder of antiseptic surgery.

Answer: Joseph Lister

38. This 1847 battle during the Mexican-American War saw U.S. forces, led by General Zachary Taylor, defeat a larger Mexican army commanded by General Santa Anna. The U.S. victory secured northern Mexico and boosted Taylor's national reputation. What is the name of this battle?

Answer: Battle of Buena Vista

39. This Danish astronomer, who famously wore a gold prosthetic nose after losing it in a duel over a mathematical dispute, collaborated with Johannes Kepler shortly before his death in 1681. Identify this scientist known for his precise calculations of planetary orbits, achieved without the use of a telescope.

Answer: Tycho Brahe

40. **Math Computation:** Find all values of G that satisfy the following equation: $|G + 21| = 12.5$ [read: the absolute value of the quantity G plus 21 equals 12.5].

Answer: Answer: (G=) -8.5, -33.5 [must have both answers] also accept: $-17/2$, $-67/2$

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QUARTER 4
LIGHTNING ROUND**

MATH: Equations Of Lines

Directions: You will be given the slope and a point on a line; your job will be to find the equation of the line in slope-intercept or y-intercept form. {Moderator – read (2,-3) as two comma negative three.}

(4,6), slope is 2	$y = 2x - 2$
(-3,-7), slope is -3	$y = -3x - 16$
(5,0), slope is 1	$y = x - 5$
(-2,4), slope is -1	$y = -x + 2$
(7,-4), slope is 8	$y = 8x - 60$
(7,-1), slope is -5	$y = -5x + 34$
(-4,2), slope is 3/2	$y = \frac{3}{2}x + 8$
(0,-9), slope is -7/4	$y = -\frac{7}{4}x - 9$
(8,3), slope is 1/4	$y = \frac{1}{4}x + 1$
.(9,2), slope is 5	$y = 5x - 43$

Extras:

.(-5,-7), slope is -3	$y = -3x - 22$
.(3,2), slope is 9	$y = 9x - 25$

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QUARTER 4
LIGHTNING ROUND**

Science: Periodic Table - Elements to the Left

Directions: Given an element from the periodic table, name the element directly to the left of it.

Total 1: _____ Total 2: _____

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Neon	Fluorine
Gallium	Zinc
Chromium	Vanadium
Bohrium	Seaborgium
Barium	Caesium
Dubnium	Rutherfordium
Beryllium	Lithium
Iridium	Osmium
Gold	Platinum
. Radon	Astatine

Extras:

. Moscovium	Flerovium
. Bismuth	Lead

**QUARTER 4
LIGHTNING ROUND**

Literature: Short Story Authors and Their Works

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STATE GAME 7****Directions:** Given the title of a short story, name the author.

<i>The Legend of Sleepy Hollow</i>	Washington Irving
<i>Rappaccini's Daughter</i>	Nathaniel Hawthorne
<i>The Luck of Roaring Camp</i>	Bret Harte
<i>The Most Dangerous Game</i>	Richard Connell
<i>The Necklace</i>	Guy de Maupassant
<i>The Man Without a Country</i>	Edward Everett Hale
<i>The Gift of the Magi</i>	O. Henry
<i>The Little Mermaid</i>	Hans Christian Andersen
<i>The Monkey's Paw</i>	W.W. Jacobs
. <i>The Lottery</i>	Shirley Jackson

Extras:

. <i>The Black Monk</i>	Anton Chekhov
. <i>The Man that Corrupted Hadleyburg</i>	Mark Twain

Extra Questions

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1. This respiratory illness, caused by the bacterium *Bordetella pertussis*, is highly contagious and is characterized by severe coughing fits followed by a distinctive sound. It poses a significant risk to infants and young children. Name this disease, commonly known by its more descriptive name.

Answer: Whooping Cough

2. This 19th-century series of interconnected novels and stories by Honoré de Balzac aims to depict French society in exhaustive detail, portraying characters from various social classes. It includes notable works such as *Père Goriot* and *Eugénie Grandet*. What is this literary masterpiece called?

Answer: La Comédie Humaine (The Human Comedy)

3. This Japanese dish is a savory pancake made with a batter of flour, eggs, shredded cabbage, and often includes ingredients like meat, seafood, or cheese. It is cooked on a griddle and topped with a variety of condiments, including mayonnaise and a special sauce. What is this dish known as?

Answer: Okonomiyaki

4. **Math Computation:** Solve the following logarithmic equation for x: $\log_2 x + \log_2(x+2) = 3$ [read: log base 2 of x plus log base 2 of the quantity x plus 2 equals 3]. Don't forget when you get your 2 solutions with the quadratic, that one may not be a valid solution.

Answer: (x=) 2

5. This American poet, painter, and activist co-founded City Lights Booksellers & Publishers, a hub for the Beat Generation. His 1958 poetry collection *A Coney Island of the Mind* became one of the best-selling poetry books of all time. Who is this influential literary figure?

Answer: Lawrence Ferlinghetti

6. This Roman emperor ruled during a period of stability and prosperity in the Roman Empire. He is best known for constructing a massive wall across the

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northern frontier of Britain to defend against invading tribes. Who is this Roman emperor who reigned from 117 to 138 CE?

Answer: Emperor Hadrian

7. This muscular valve, located at the junction of the esophagus and stomach, prevents the backflow of stomach acid into the esophagus. It relaxes to allow food to pass into the stomach during swallowing. Name this structure.

Answer: Cardiac Sphincter (esophageal sphincter)

8. This cymbal, commonly found in drum kits, produces a sustained, ringing sound and is typically used to keep a steady rhythm, often in place of the hi-hat in jazz, rock, and other genres. What is this cymbal that is played with a light, repetitive stroke, it helps define the groove and can also be used for accents or crashes?

Answer: Ride Cymbal

9. This politician served as the Governor of Oklahoma from 2003 to 2011, and issued Executive Order 04-21, which created the Governor's Ethnic American Advisory Council. Who is this governor who signed a bill into law that set out an across-the-board salary increases for state employees?

Answer: Brad Henry

10. **Math Computation:** Find all solutions for x in the following equation: $|8 - 2x| = 14$ [read: the absolute value of the quantity 8 minus $2x$ equals 14].

Answer: ($x=$) 11, -3 [must have both]