1. Under the compromise of 1877 , David M. Keyes was made head of this US executive agency. It was first established by the American government at the Second Continental Congress. Its offices developed the Zone Improvement Plan code in 1963. In 1912 they stopped service on Sunday and in 1971, their "general" was removed from the Cabinet. FTP, name this agency whose first head was Benjamin Franklin and who will not stop serving you under the presence of snow or rain.

A: US Postal Service, accept USPS or equivalents
2. While a captive at Thebes, this man received military and political training from Epaminondas. His victory at the Battle of Chaeronea ended Greek independence, and Demosthenes argued vehemently against him in a series of eponymous speeches warning of the threat he posed to Greek freedom. This ruler introduced the phalanx but was assassinated before he could embark on his own Persian campaign, which was left to his son. FTP, name this king of Macedon and father of Alexander the Great.

## A: Philip II of Macedon Prompt on Philip of Macedon

3. At 1 A.M. on December 5, 1791, he died of an unknown illness, possibly rheumatic fever. Antonio Salieri was wrongfully accused of poisoning him in the hysteria following this man's death at age 35 . On his deathbed, he had much of his incomplete Requiem Mass sung to him. Earlier that year, he completed several landmark works such as his Clarinet Concerto and the opera The Magic Flute. FTP name this Austrian composer of The Marriage of Figaro.

## A: Wolfgang Amadeus Mozart

4. This Florentine began his career as a goldsmith before studying architecture and mathematics in Rome due to the influence of his friend Donatello. He lost a sculpture competition to Ghiberti but may be better known for solving the problem of the Santa Maria del Fiore. FTP identify this Renaissance architect who lost the competition for the Florence Baptistery Doors but designed and built a dome for the city's cathedral.

A: Filippo Brunelleschi
5. This man's feats were outlined in the epic poem The Lusiads and his success enabled Portugal to become a world power and break the Muslim monopoly over Eastern trade. He sailed farther than Bartolomeu Dias and after retiring in 1524, he served as the king's viceroy, but died three months later. FTP name this Portuguese navigator, the first European to find a sea route to India.

## A: Vasco da Gama

6. Mark Twain, who found this painting obscene, noted that the central figure of this 1583 work was probably a slave girl. In the background, two women are rummaging through a chest under a window through which the sunset can be seen. A small dog is curled up on the couch next to the reclining nude, who wears a bracelet and headband and is holding flowers. FTP name this work by Titian, the inspiration for Manet's Olympia.

## A: Venus of Urbino

7. To the north of this body of water are the Rhodope Mountains. Gulfs in it include the Saronic, the Gulf of Saros, the Gulf of Argolis, and the Gulf of Salonika. In the west of this sea lies Euboea, its largest island. Other islands and island groups include the Sporades, Cyclades, Lemnos, and Chios. FTP name this sea, separated from the Sea of Marmara by the Dardanelles, which lies to the east of Greece.

## A: Aegean Sea

8. This novel tells the story of a 19-year-old who deserts during his first battle. He meets a group of injured men in the forest, among them the "Wounded Soldier" and Jim Conklin, only to return due to guilt and become one of his unit's best fighters. FTP name this anti-war novel set during the American Civil War by Stephen Crane about Henry Fleming.

## A: The Red Badge of Courage

9. This great-grandson of Perseus was later accidentally killed by his third wife, Deianira, who foolishly believed the centaur Nessus. He was aided in one of his famous feats by his nephew, causing, along with the use of a river, two additional trials to be added by Eurystheus in penance for killing his wife and children. FTP name this husband of Megara and son of Zeus and Alcmene who was forced to complete 12 Labors.

## A: Hercules or Heracles

10. The most common type of this reaction is the Embden-Meyerhof pathway, which is often used as a synonym for the reaction as a whole. The products go on to form Acetyl CoA or sometimes used in fermentation. Since two ATP molecules are required to activate it, it produces only two net ATP molecules in addition to two NADH molecules. Name this process which breaks one glucose molecule into two molecules of pyruvic acid.

## A: Glycolysis

11. Tai-zu established this dynasty after the end of the Five Dynasties and Ten Kingdoms Period. This Chinese dynasty was divided into two directionally distinct periods. During this dynasty, the first standing navy was established, the government distributed paper money, and the Mongols led by Kublai Khan took over. FTP, name this Chinese dynasty lasting from 970-1279, that saw the invention of gunpowder and was succeeded by the Yuan.

A: Song Dynasty Accept equivalents
12. While this man began his career as a Regionalist, he soon moved entirely into abstract art. Married to fellow artist Lee Krasner, he was an alcoholic who died in a car crash. He placed his canvases on walls or on the floor rather than an easel and works of his include Blue, The She-Wolf, and Lavender Mist. He pioneered action painting in 1947. FTP name this artist known as Jack the Dripper.

## A: Jackson Pollock

13. While a certain famous operon codes in DNA for the production of this compound, in a variety of anaerobic respiration, special yeasts convert this disaccharide into a related acid, often the cause of muscle cramping. Mammary glands contain the synthetase necessary to generate this compound, which deposits under concentrated whey, a cheese byproduct. FTP, name this sugar, found in about $5 \%$ concentration in milk, to which some are intolerant.

## A: Lactose

14. In 1996, this man had the second-highest batting average of any American League right-hander after Joe DiMaggio in 1939. Although he established new records for shortstops in slugging, hits, runs, doubles, and extra-base hits, he lost the MVP award to Juan Gonzalez by three votes that year. FTP name this three-time MVP and current third baseman for the New York Yankees.

## A: Alexander Emmanuel Rodriguez Prompt on A-Rod

15. At the center of active galactic nuclei, such as Quasars, the supermassive type of this phenomenon may occur. The primordial variety, as proposed by Stephen Hawking, is also known as the "mini-" type and may emit some radiation, now named for that scientist, out of the event horizon. FTP, name these astronomical entities whose color refers to gravity's ability to suppress all forms of radiation within one.

## A: Black Holes

16. The gamma function of one half gives the square root of this value. In 1655 Wallis gave an infinite product that converged to it. In 1706 Machin developed a formula to show it is equal to sixteen times the arctangent of one fifth minus four times the arc tangent of one two-hundred thirty ninth. Archimedes approximated this value by calculating the perimeters of regular polygons inscribed and circumscribed about circles. FTP give this mathematical constant that gives the ratio of a circle's circumference to its diameter, approximated by $22 / 7$.

A: Pi Prompt on $\mathbf{3 . 1 4}$ etc
17. This character appears in 24 books, many of which were first published in serial form. He first obtains the help of the Waziri in the second book, which deals with his adventures after he nobly denies his heritage after receiving a telegram from his friend d'Arnot, telling him that he is the son of John Clayton. He does this to help Jane, the girl he loves. FTP name this Edgar Rice Burroughs character who defeats the apes Kerchak, Tublat, and Terkoz and becomes their king.

## A: Tarzan of the Apes Prompt on John Clayton or Lord Greystoke

18. One argument for a correction to it is flawed in its assumption of a reversible path in an area of thermodynamic instability. Despite this, Maxwell's Equal Area construction is generally considered a valid modification of this equation. It can also be written in a manner that allows for it to be used as a PVT equation for compressible fluids. Above the critical temperature, the ideal gas law is improved upon by, FTP, this equation of state that accounts for the fact that particles have size
and interact with each other.
A: Van der Waals Equation
19. She was a schoolteacher as well as a poet, and in later years taught Spanish literature at Columbia University. Her first poems to be published appeared in 1914 under the title Sonetos [so-NAY-tos] de la Muerte [MWEAR-tay], but her first major collection was Desolación [deh-so-law-see-OWN], in 1922. Many of her poems focus on themes of motherhood, children, and love. FTP name this Chilean poet, winner of the 1945 Nobel Prize in Literature and teacher of Pablo Neruda.

## A: Gabriela Mistral Accept Lucila Godoy y Alcayaga

20. This civilization's mature period lasted from 2600 to 1900 BC. It centered on three main cities extending along two primary river valleys to the coast, but over 2000 sites have been found, primarily in two countries. Cities of this civilization had exact grid layouts and extremely sophisticated sanitation systems but exhibit no monumental constructions. FTP name this civilization that built Mohenjo-Daro and Harappa.

A: Indus River Valley Civilization Accept Harappans before "Harappa"

## STOP HERE

You have reached the end of the round. Do not continue reading unless a question was thrown out or the game is tied.
21. The main character of this novel is the captain of a ship belonging to Pierre Morrel. The jealous Danglars and Fernand Mondego, who craves the beautiful Mercedes, cause him to be brought before Villefort, a royal prosecutor, who consigns him to the Chateau D'If to safeguard his own career. However, Edmond Dantes escapes the prison and creates an alias using a treasure revealed to him by a fellow prisoner. FTP name this novel in which the namesake nobleman visits revenge upon those who unjustly imprisoned him, a work of Alexandre Dumas.

A: The Count of Monte Cristo Accept Le Comte de Monte-Cristo

## Bonuses

1. FTPE identify the following Roman emperors.
1) This second emperor was the first Julio-Claudian.

A: Tiberius Caesar Augustus or Tiberius Claudius Nero
2) This famed Stoic and author of Meditations was the last of the Five Good Emperors.
A: Marcus Aurelius Antoninus Augustus Prompt on Marcus or Aurelius
3) This last man to govern both the Eastern and Western Roman Empire made Christianity Rome's state religion.
A: Flavius Theodosius Accept Theodosius I or Theodosius the Great
2. FTPE answer these questions about Gone with the Wind.

1) This woman's husbands include Charles Hamilton and Frank Kennedy, although she spends much of the novel in love with Ashley Wilkes before determining her true love.
A: Scarlett O'Hara Accept partial name
2) Scarlett discovers that she loves this scandalous gentleman, her eventual husband and father of her daughter Bonnie Blue.
A: Rhett Butler Accept partial name
3) This woman is the author of Gone with the Wind.

A: Margaret Mitchell
3. FTPE identify the following Roman heroes.

1) These triplets fought the Curiatii to resolve the war with Alba Longa.

A: Horatii Accept any mention of brothers/triplets in addition to the name
2) This indirect namesake of an Ohio city immediately resigned his position as dictator when his job was done to return to his farm.

## A: Lucius Quinctius Cincinnatus

3) This man, who may have had one eye, defended the bridge across the Tiber from the Etruscans while his comrades destroyed it behind him.

## A: Horatius Cocles Prompt on Cocles

4. FTPE identify the following piano sonatas by Ludwig van Beethoven.
1) The stormy third movement of this piano sonata provides bitter contrast to the reflective qualities of the famous first movement. It received its nickname from the poet Ludwig Rellstab, who thought the first movement was reminiscent of Lake Lucerne at night.
A: Sonata No. 14 "Moonlight" Accept 14
2) Dedicated to Prince Karl von Lichnowsky, this piano sonata is iconic of Beethoven's connection with the key of C minor. Written when Beethoven first learned he was going deaf, it bears a nickname meaning "evoking pity," which it shares with a Tchaikovsky symphony.
A: Sonata No. 8 "Pathetique" Accept $\underline{8}$
3) Frequently considered to be one of the most difficult piano works ever written, this late sonata was a revolutionary work in its time. Two unusual characteristics are that is in four movements and the last movement contains contrapuntal elements of the Baroque period.
A: Sonata No. 29 "Hammerklavier" Accept $\underline{29}$
5. FTPE, name these Canadian islands.
1) The largest Canadian island, it is separated from Quebec by the Hudson Strait.

A: Baffin Island
2) This large Arctic Ocean island is the northernmost island in Canada. Its northernmost point is Cape Columbia.
A: Ellesmere Island
3) The Hecate Strait separates these British Columbia islands from the mainland.

They lie to the north of Vancouver Island.

## A: Queen Charlotte Islands

6. FTSNOP identify the constituent elements of the following alloys.
1) FFPE name the two elements that make up brass.

A: Copper and Zinc Accept $\underline{\mathbf{C u}}$ and $\underline{\mathbf{Z n}}$
2) FFPE name any 2 of the 6 common components of bronze.

A: Copper, Tin, Manganese, Aluminum, Phosphorus, Silicon or Cu, Sn, Mn, Al, $\underline{\mathbf{P}}, \underline{\text { Si }}$ Accept the first 2 given in any order
3) FFPE name any 2 of the 3 components of non-surgical stainless steel.

7. FTPE identify the following planetary moons.

1) This innermost Galilean moon of Jupiter is the fourth largest moon in the Solar System as well as the most geologically active.
A: Io
2) The Solar System's largest natural satellite, this is the only Galilean moon named for a male.
A: Ganymede
3) FFPE name both moons of Mars, whose names mean fear and terror.

A: Phobos and Deimos
8. FTPE name the following modern artists from works or styles.

1) The Fountain, a urinal with "R. Mutt" written on it.

A: Marcel Duchamp
2) Campbell's soup cans and several portraits of Marilyn Monroe.

A: Andy Warhol Accept Andrew Warhola
3) He is known for color field painting.

A: Mark Rothko Accept Marcus Rothkowitz
9. FTPE answer these questions about the musical The Producers.

1) This writer also known for History of the World, Part I and Spaceballs adapted it from his 1968 film of the same name.
A: Mel Brooks Accept Melvin Kaminsky
2) FTP name either of the title characters.

A: Max Bialystock or Leo Bloom Accept partial name
3) Bialystock and Bloom seek to ensure themselves a flop with a musical entitled Springtime for this German chancellor.

## A: Adolf Hitler

10. FTPE identify these types of Japanese theater.
1) Usually dealing with historical themes, this form uses masks. Actors and musicians do not rehearse together to avoid influencing each other.
A: Noh Accept Nogaku
2) This type of theater is more flamboyant and unrestrained than No and emphasizes improvisation.

A: Kabuki
3) Many of this style's plays, which employ 3 foot tall puppets, were adapted to Kabuki.

## A: Bunraku Accept Joruri

11. FTPE name these kings of England or Great Britain.
1) This king of Wessex drove the Danes out of his lands, began legal and educational reforms, and is known as the Great, as well as the first English king.
A: Alfred the Great
2) After winning a monstrous victory over Harold Hardrada of Norway, he was defeated at the Battle of Hastings in 1066. An abbey was built over the site of his death.
A: Harold II Accept Harold II Godwinson Prompt on Harold
3) Among the acts of his reign were his quarrels with Archbishop Thomas à Becket, who was later killed by his nobles. He was married to Eleanor of Aquitaine and was the first king of the Angevin house of the Plantagenets.
A: Henry II Prompt on Henry
12. FTSNOP, name these parts of muscle anatomy.
1) This is the functional unit of a muscle and is the part that contracts

A: Sacromeres
2) For five points each, name the two proteins that contract in a sacromere and allow a muscle to move
A: Actin and Myosin
3) This is the name for the part of the muscle that attaches to the bone and pulls the bone when the muscle contracts.

## A: Tendons

13. It was originally found scribbled by its namesake in the margins of a book. FTPE:
1) Name this mathematical equation, which according to Howard Eves, "has the peculiar distinction of being the mathematical problem for which the greatest number of incorrect proofs have been published".
A: Fermat's Last Theorem
2) This mathematician announced his proof of the Taniyama-Shimura conjecture in 1993, but it was flawed and only corrected two years later. It resolved the problem of finding a proof to Fermat's Last Theorem.
A: Andrew Wiles
3) This lesser known work of Fermat states that if $p$ is a prime number, than for any integer a , $\left(\mathrm{a}^{\wedge} \mathrm{p}\right)$ - a ("the quantity a raised to the p -th power minus a ") is divisible by p .
A: Fermat's Little Theorem
14. FTPE name following actors who portrayed James Bond in film.
1) He rose to superstardom as the first Bond in such films as Dr. No, From Russia With Love, and Goldfinger.
A: Sean Connery
2) His portrayal of Bond saw the revival of the series in spite of doubts that its
popularity would wane with the end of the Cold War. His films included GoldenEye and Tomorrow Never Dies.

## A: Pierce Brosnan

3) Despite overall box office success, he only portrayed Bond twice, in The Living Daylights and License to Kill.

## A: Timothy Dalton

15. Name these anti-communist Latin American dictators, FTPE.
1) This Chilean dictator deposed Salvador Allende in a 1973 coup, and was accused of various crimes, including human rights violations and censorship.
A: Augusto Pinochet Ugarte
2) He was military dictator of Panama from 1983 to 1989 , but angered American leaders, who had previously supported him. He was captured, tried, and now resides in a Miami prison.
A: Manuel Noriega
3) This Cuban was overthrown by Fidel Castro in 1958.

A: Fulgencio Batista y Zaldívar
16. Identify these statues with subjects from Greek mythology, FTPE.

1) This statue of the goddess of love was found on a namesake island in the Aegean Sea, and is now at the Louvre, minus her arms.
A: Venus de Milo Accept Aphrodite of Melos
2) A statue of Nike standing on a ship's prow, it lacks a head. It was found on an island in the northern Aegean.
A: Winged Victory of Samothrace Accept Nike of Samothrace, Prompt on Victory or Nike
3) This bronze statue group was created by Benvenuto Cellini, and depicts the hero standing on the headless body of a Gorgon, whose head he will bring away.
A: Perseus Holding the Head of Medusa Accept Perseus with the Head of Medusa
17. FTPE name these Edith Wharton novels.
1) In this novel, the titular character and Mattie Silver attempt suicide by sled.

A: Ethan Frome
2) This novel details the decline of Lily Bart.

A: The House of Mirth
3) Wharton became the first woman to win a Pulitzer Prize for this novel about Newland Archer, May Welland, and Ellen Olenska.

## A: The Age of Innocence

18. Give the scientific names for the following bones.
1) The upper portion of the skull.

A: Cranium
2) The shoulder blade.

A: Scapula
3) The collar bone.

A: Clavicle
19. FTPE answer these related questions about Greek mythology.

1) This son of Zeus and Danae slew Medusa.

A: Perseus
2) When Perseus killed Medusa, this creature that would later be captured by Bellerophon sprang from her body.
A: Pegasus
3) This Greek messenger god lent Perseus his winged sandals for his journey.

A: Hermes Do NOT accept Mercury
20. FTPE name these characters from Mark Twain's The Adventures of Tom Sawyer.

1) Tom likes this girl, the judge's daughter.

A: Becky Thatcher Prompt on Thatcher
2) Besides Huck Finn, this boy is Tom's best friend.

A: Joe Harper Prompt on Joe
3) This mean-spirited boy is Tom's half-brother.

A: Sidney

