

1. Challoner's translation of this work was the official version until 1943, and currently several English translations are approved for use, but only a few are based upon this. The traditional English translation of it is referred to as the Douay-Rheims Bible. Approved by the Council of Trent in 1546 it had been completed over a thousand years earlier. FTP name this Latin translation of the Bible executed largely by Saint Jerome.

Answer: **Vulgate**

2. A form of the equation for the group velocity can be derived expressed as $h \text{ times } dv/dp$ where v is the velocity of the group and p is its momentum. By substitution, this principle arises, with both momentum-position and energy-time formulations. FTP name this principle that results in the inability to simultaneously know the position and momentum of a particle.

Answer: **Heisenberg Uncertainty Principle or Principle of Indeterminacy**

3. The rich topsoil of this location is a source of great wealth for the nation that controls it, and it takes up approximately one fifth of the nation's size, but two thirds of its population. Extending from the Andes to the Atlantic Ocean, this region takes its name from the Spanish word for "plains". FTP identify this geographic region that fans out around Buenos Aires.

Answer: **The Pampa** (accept pampas)

4. A posthumous collection of works entitled *Carnival* was published in 1977 while *Daguerreotypes and Other Essays* is another posthumous collection of her nonfiction. Living from 1914 to 1931 in what is now Kenya on a coffee plantation, her first work, *Seven Gothic Tales*, was published three years after her stay there, which was the basis for her most famous work. FTP name this Danish author of the 1937 work *Out of Africa*.

Answer: **Isak Dinesen or Baroness Karen Dinesen Blixen**

5. He was ordered to Rome by Alexander VI to explain his claim of special revelation, but he declined for fear of violence. Forbidden to preach, he nevertheless did so, drawing excommunication and the threat of the interdict against Florence, forcing him to surrender to civil authorities. Convicted of heresy by the Church, he was hanged and his body burned. FTP name the Florentine Dominican friar behind the Bonfire of the Vanities.

Answer: **Girolamo Savonarola**

6. The work is set during the wars between Alba and Rome in 669 B.C. It has been decided that the dispute between the two cities be settled by combat between two groups of three champions each. Sabina, a sister to the Curiatii, is married to one of the title brothers, while their sister Camilla is married to a Curiatii. FTP identify this painting depicting three brothers taking an oath by the sword, executed by Jacques-Louis David.

Answer: **The Oath of the Horatii**

7. Nominated for 9 Oscars, it took home only best original screenplay. Although it received almost unanimous praise at the time of its release, it was not a commercial success, due to interference from William Randolph Hearst. The first great independent movie and the first movie to use the technique of deep focus, this is, FTP, what 1941 Orson Welles movie, where we ultimately find out that Rosebud is a sled?

Answer: **Citizen Kane**

8. The dominate vegetation during the early part of this era included ferns, cycads, and ginkgophytes. Modern gymnosperms first became recognizable and by the middle period the earliest angiosperms had appeared. FTP name this geologic era whose constituent time periods include the Triassic, Jurassic and Cretaceous.

Answer: **Mesozoic era**

9. The family of black servants to the central family include Roskus and Dilsey and their children Versh, T.P. and Frony, while one of the brothers and his sister Caddy's illegitimate son share the same name. Divided into four sections, the last one is seen as narrated by Dilsey while the other three are narrated by Benjamin, Jason IV, and Quentin. FTP name this novel about the fall of the Compson family written by William Faulkner.

Answer: **The Sound and the Fury**

10. He was returning from the capitol building after attempting to pass a bill gerrymandering the district of political rival Benjamin Pavy, when he encountered Pavy's son-in-law Carl Weiss, who shot him in the abdomen at close range. At first a strong supporter of Franklin Roosevelt, they broke over what he saw as Roosevelt's lack of desire to attempt to redistribute wealth. FTP name this former governor and Congressman who at one point was called a dictator because of the control he held over the state of Louisiana.

Answer: Huey Pierce **Long**

11. It follows from when Rolle's theorem is applied to this graph that there exists a critical point at which the marginal tax revenues equal zero. Concave down, it intersects the 0 revenue axis when tax rates are raised to 100%, as nobody will work at that point. FTP identify this economic curve which creates a relationship between tax rates and tax revenues.

Answer: **Laffer** curve

12. The son of Zeus and the nymph Pluto, he once had the good fortune of dining on nectar and ambrosia with the gods. His first act of ingratitude was to share this food with his mortal friends, then he stole the golden hound of Zeus and lied about it. But it was for his final act that he was sentenced to a life of eternal longing in Hades. FTP name this king of Lydia who fed his son Pelops to the gods.

Answer: **Tantalus**

13. Born in Madison, Wisconsin, in 1908, his father was the first graduate of Johns Hopkins medical school. In the fall of 1945, he joined the newly formed research group in solid-state physics at the Bell Telephone Laboratories, and did the work that would win him his first Nobel Prize, in 1956 for physics. Later, while a professor at the University of Illinois, he shared yet another Nobel Prize in physics, for his contribution in the development of superconductivity theory. FTP, name this man, whose name is the B in BCS theory.

Answer: John **Bardeen**

14. His father Felice was a socialist station master while his mother Pina Rota published an autobiographical account of her home town in the 1970s. Following World War II there was a burst in Italian drama because of the piccolo teatri, which greatly influenced his drama. Marrying his leading lady Franca Rame, and they became partners in his writing. FTP name this author of "Accidental Death of an Anarchist" and winner of the 1997 Nobel Prize in Literature.

Answer: **Dario Fo**

15. In the 1930s he turned his attention further away from conventional philosophy and began to admire the works of such poets as Friedrich Hölderlin, regarding poetry as the highest form of language. Succeeding Husserl at Freiburg, he became a leading figure of the phenomenological movement, and was a strong influence on Sartre. FTP name this philosopher and author of Being and Time.

Answer: **Martin Heidegger**

16. Born in Uhrovec, he moved to Russia in 1925 and remained there until 1938. Becoming a member of his nation's Communist party in 1939, he worked in the resistance movement against Germany and following the war became Presidium of the Communist Party in 1962. FTP name this man who the following year became the first secretary of the Slovak Communist Party whose liberal reforms led to the Prague Spring.

Answer: **Alexander Dubcek**

17. Bell makers in the Netherlands created the present-day form of this instrument in the mid to late seventeenth century, while the bell-lyra type was first played in a royal fife and drum corp in England during the 1850s. The bell-lyra form is held in one hand and is mainly used in marching bands while the orchestra bells are primarily used for their bright metallic sound. FTP name this instrument that consists of two rows of metal bars on a frame that are struck by one or two mallets.

Answer: **glockenspiel**

18. Suffering from tuberculosis at an early age he frequented southern France, which inspired his 1768 work which features such satirical episodes as Yorick weeping over an ass chewing a thistle. A member of the English clergy, he became famous after the publication of an incomplete novel the year before his death. FTP name this author of A Sentimental Journey and The Life and Opinions of Tristram Shandy, Gentleman.

Answer: Laurence **Sterne**

19. For conservative forces this quantity is equal to zero, and the divergence of this quantity is zero. Also true is that this value applied to a gradient is also zero. Defined in terms of the ordinary cross product, it analyzes del as a vector operator. FTP identify this vector quantity, a measure of the amount of twist of a vector field.

Answer: **curl**

20. It established a border at the mouth of the Sabine river and going northwest to 42 degrees north latitude. It also called for the United States to pay \$5 million in claims of US citizens against the other involved government. Ratified in 1821 and signed two years earlier, FTP identify this treaty named for the Secretary of State and the Spanish minister who signed it, which granted the United States control of what is now Florida.

Answer: **Adams-Onis Treaty**

21. Its inventor was knighted in 1879 and also invented a typesetting machine. This process remained in use after World War II, but the open-hearth method had become more important in 1910. Patented in 1855, it called for air to be blown through molten pig iron, burning out most of the impurities. FTP name this process for converting pig iron to steel.

Answer: **Bessemer Process** (acc. **Bessemer-Kelly process**)

Settling in Paris in 1904, his early works were realistic and reflected the influence of Rodin. Falling under the influence of African and prehistoric sculpture, his simplistic style had become completed by 1910. In 1940 he produced a four foot four inch bronze in which he attempted to capture the essence of flight in action. FTP name this Romanian-born sculptor of Bird in Space.

Answer: **Constantin Brancusi**

22. Publications by this man such as History of the Russian Revolution and Diary in Exile remain influential in Western Marxist circles. As commissar of foreign affairs he conducted negotiations for the signing of the Treaty of Brest-Litovsk, and during the civil war raised the Red Army to over 5 million strong. Falling from grace in the post-Lenin Soviet Union, Ramon del Rio ultimately silenced this vocal Bolshevik. FTP name this leader of the Russian Revolution exiled to Mexico City in 1937.

Answer: **Leon Trotsky** or Lev Davidovich **Bronstein**

23. Among the first to advocate field research, much of his work is based upon such research amongst the Indian tribes of the Pacific Northwest. Focusing on the diversity of human cultures, he argued that the differences were environmental, not hereditary, and in 1940 published his work Race, Language and Culture. FTP name this anthropologist who, during his tenure at Columbia University taught Edward Sapir and Margaret Mead and published the work The Mind of Primitive Man.

Answer: **Franz Boas**

1. Name the mathematician from a brief description FTPE.

(a) Some of his accomplishments include ending the need for research in invariant theory, algebraic number theory, and axiomatic foundations of geometry and theoretical physics (which he considered too difficult for physicists). He is best known for the set of 23 problems he left at the 1900 International Congress of Mathematicians.

Answer: **David Hilbert**

(b) Working as a clerk, he was persuaded to send papers he had discovered on elliptic integrals, partitions, and analytic number theory to Godfrey Hardy. Largely self-taught, he died in 1920 after being named a fellow of Trinity in 1918.

Answer: **Srinivasa Ramanujan**

(c) While researching under Gauss, he published papers first introducing the concept of manifolds, while his zeta-function is crucial to the study of the distribution of prime numbers and a hypothesis that remains unsolved concerning this function. He died of tuberculosis in Italy in 1866.

Answer: **Georg Friedrich Bernhard Riemann**

2. Given a brief description name the work by Ben Jonson FTPE.

(a) His first original play, it was produced at the Globe Theater, characters include Young Kno'well and Captain Bobadil.

Answer: **Every Man in His Humour**

(b) The title character is actually a boy trained by Sir Dauphine in a ploy to gain his inheritance from his uncle Morose.

Answer: **Epicene or The Silent Woman**

(c) In this comedy the title character is a childless Venetian nobleman who plans to deceive his associates into giving him a fortune by leading them to believe that he is dying.

Answer: **Volpone or the Fox**

3. Identify the following about cell division FTPE.

(a) In animal cells actin filaments form around the perimeter of the cell, pinching the cell into two daughter cells through this form of cell division.

Answer: **cytokinesis**

(b) Each centrosome has a pair of these organelles which are built from an array of microtubules, and is used in animal cell division.

Answer: **centrioles**

(c) This is the enzyme that hydrolyzes peptide bonds that includes separase and is used to break down cohesin during Anaphase.

Answer: **protease**

4. Answer the following about Impressionists FTPE.

(a) He met Boudin, who encouraged him to work outside, which led to his exhibiting in 1874 at the first Impressionist Exhibition with the work Impression: soleil levant.

Answer: **Claude Monet**

(b) One work caused public outcry as the model was clearly a prostitute, and following advice from Courbet he always painted contemporary subjects, as with his A Bar at the Floies-Bergere.

Answer: **Edouard Manet**

(c) In 1885 he met Signac and Seurat and adopted Divisionism, however he was a leader of the original Impressionist and the only one to exhibit at all eight exhibitions in Paris.

Answer: **Camille Pissarro**

5. While Billy Corgan is still making music, Zwan sucks compared to Smashing Pumpkins. Show how much you know about the better of the two by identifying the Pumpkins song from lyrics and the album FTPE.

(a) "I wanted more than life could ever grant me. Bored by the chore of saving face." Siamese Dream.

Answer: **Today**

(b) "I took my love, I took it down. I climbed a mountain and I turned around. And I saw my reflection in the snow covered hills..." Pisces Iscariot.

Answer: **Landslide**

(c) "and I still believe that I cannot be saved." Mellon Collie and the Infinite Sadness

Answer: **Bullet with Butterfly Wings**

6. Given a description of something from nonlinear dynamics or chaos theory identify it FTPE.

(a) This effect comes from high sensitivity to initial conditions and results in extreme long-term inaccuracies from minor errors in initial conditions.

Answer: **Butterfly** effect

(b) This set of three equations, a simplification to model the atmosphere, resulted in the first observation of the butterfly effect by their namesake.

Answer: **Lorenz** equations (not Lorentz)

(c) The number of these values depends upon the dimension of the phase space, and they quantitatively measure the average rate of convergence or divergence between two neighboring trajectories.

Answer: **Liapunov** exponent

7. His hall is Breidablik and he was a son of Odin and Frigg. FTPE,

(a) identify this Norse deity slain by mistletoe.

Answer: **Balder**

(b) this daughter of Nep who was Balder's wife.

Answer: **Nanna**

(c) the son of Balder and Nanna, who was the Norse god of justice.

Answer: **Forseti**

8. Answer the following about everyone's favorite iron-fisted Communist dictator, Mao Tse-Tung FTPE.

(a) The Chinese Communist party aligned with this Nationalist Party headed by Sun Yat-Sen in an effort to unify China, however, distrust with Chiang Kai-Shek led to warfare.

Answer: **Kuomintang (acc. Guomindong)**

(b) This strategic retreat resulted in a 6,000 mile journey for the Communists to the Shaanxi province.

Answer: **Long March**

(c) Mao's widow, she became involved in the power struggle following Mao's death and had been a member of the Gang of Four.

Answer: **Jiang Qing**

9. Answer the following miraculously related people FTPE.

(a) Operas by this American composer include Akhenaten and The Voyage, but he is more famous for a five hour epic based upon the life of a famous scientist.

Answer: **Philip Glass**

(b) Works by this solo cellist include Silk Road Journeys and has starred in the PBS series "Inspired by Bach."

Answer: **Yo-Yo Ma**

(c) Yo-Yo Ma performed the cello solos for the Philip Glass soundtrack to the film Naqoyqatsi by this director of Erin Brockovich and Traffic.

Answer: **Steven Soderbergh**

10. Identify the following works of Nathaniel Hawthorne 5-10-15.

(5) Colonel Pyncheon obtained the title object by accusing Matthew Maule of witchcraft, subsequently bringing a curse upon the colonel and generations that follow.

Answer: **The House of the Seven Gables**

(10) Set in a Utopian community modeled on Brook Farm, characters include the narrator Miles Coverdale, Hollingsworth, and Zenobia.

Answer: **The Blithedale Romance**

(15) The title character of this anonymously published novel is a student who falls in love with Ellen Langdon, the ward of the president of Harley College.

Answer: **Fanshawe**

11. Break out your lists, folks! It's time for a Nobel Prizes bonus, and this one's for chemistry. You know the drill, FTPE.

(a) 1903 for his work in the electrolytic theory of dissociation.

Answer: Svante August **Arrhenius**

(b) 1912 for his discovery of his namesake reagents.

Answer: Victor **Grignard**

(c) For his work in thermochemistry, he earned the 1920 award, but is probably equally noted for his work that determines the cell potential from the information on the reaction.

Answer: Walther Hermann **Nernst**

12. Identify the following about the Wilson presidency FTPE.

(a) In 1914 Congress passed this act, which clarified and supplemented another act passed in 1890 and prohibited exclusive sales contracts, among other things.

Answer: **Clayton Antitrust Act**

(b) Congress approved the purchase of the Virgin Islands in 1917 from this European nation.

Answer: **Denmark**

(c) This 1920 amendment was passed, the third amendment under his administration.

Answer: **Nineteenth Amendment**

13. Break out your atlases because it's geography time. Identify the following South American bodies of water FTPE.

(a) Formed by the Parana and Uruguay rivers, this 170 mile long river forms the boundary between Uruguay and the Buenos Aires province of Argentina.

Answer: **Rio de la Plata**

(b) Entering the Atlantic Ocean near Trinidad, this river forms part of the border of Colombia and Venezuela, and originates in the Parima mountains.

Answer: **Orinoco River**

(c) Located near the south shore of this body of water is the city of Tiahuanaco.

Answer: Lake **Titicaca**

14. Ah, Utah. 5-10-15, answer the following about the Book of Mormon FTPE.

(5) It was this Mormon who is said to have translated the Book of Mormon from the gold plates it was presented to him on.

Answer: **Joseph Smith**

(10) The name of the angel that presented Joseph Smith with the Book of Mormon.

Answer: **Moroni**

(15) The Book of Mormon relates the story of Hebrews who migrated to the United States. The Lamanites, who eventually became the American Indians, are said to have destroyed this other group, taught by Jesus.

Answer: **Nephites**

15. Name the Willa Cather works FTPE.

(a) This Pulitzer Prize winner chronicles Claude Wheeler's life in the trenches and ultimate death in France during World War I.

Answer: **One of Ours**

(b) Based upon the lives of Jean Baptiste Lamy and Joseph Machebeuf, this work chronicles efforts to set up a mission in the American Southwest.

Answer: **Death Comes for the Archbishop**

(c) Her second work, this story follows Emil and Carl Linstrum and Alexandra Bergson and their lives in Nebraska.

Answer: **O! Pioneers**

16. Identify the constellations from a list of stars for ten, five if you require what the constellation is shaped like.

(10) This includes the stellar cluster Praesepe, but no bright stars.

(5) The Crab

Answer: **Cancer**

(10) This constellation includes the source of the strongest X-ray source in the sky, as well as the stars Shaula and Antares.

(5) The Scorpion (surprise)

Answer: **Scorpius or Scorpio**

(10) The only bright star in this constellation is Alnath, a double star whose member stars can only be observed through a telescope.

(5) The Water Monster

Answer: **Hydra**

17. Some people are still fighting the Civil War, but these guys aren't. Identify the following dead Civil War generals FTPE.

(a) During fighting at Shiloh his corps inflicted a great deal of damage to Grant's army, and following the death of Albert Johnston he became a full general. He was replaced by Joseph Johnston after his failure at Chattanooga.

Answer: **Braxton Bragg**

(b) His fighting style at Antietam and Fredericksburg earned him his nickname, while the failure of Burnside at Fredericksburg led to his command of the Army of the Potomac.

Answer: **Joseph Hooker**

(c) This cavalry general, following the Civil War, formed the Ku Klux Klan, but ordered it to disband in 1869, which obviously didn't work very well.

Answer: **Nathan Bedford Forrest**

18. FTPE, identify Erikson's crises of early childhood from clues. Warning - two answers required per part:

5, 5) The crisis arises out of an infant's dependency on others for food, warmth and affection. If their needs are met consistently and responsively, the infant will develop a strong and secure attachment with their parents.

Answer: **Trust vs. Mistrust**

5, 5) As the toddler learns to walk, talk, use the toilet, and do things for themselves, they develop self-control and confidence. If parents encourage initiative, the child will develop the confidence required for independence. If not, the child may become ashamed of his or her behavior.

Answer: **Autonomy vs. Doubt (accept Independence vs. Shame)**

5, 5) The crisis of early childhood, this crisis arises from the newfound power children have because of their motor skills and increased social interaction. If the child is encouraged and the parents are consistent with discipline, the child will accept, without guilt, that certain things are not allowed.

Answer: **Initiative vs. Guilt**

19. A certain novel, FTPE

(10) This 1957 novel, considered by many to be the worst ever written, seeks to answer the question "Who is John Galt?"

Answer: **Atlas Shrugged**

(10) The author of Atlas Shrugged, as well as The Fountainhead, and We the Living.

Answer: **Ayn Rand**

(10) This is the philosophy of Ayn Rand, which dominates Atlas Shrugged. She based it on reason, self-interest, capitalism, and objective reality.

Answer: **Objectivism**

20. Answer the following hodgepodge about economic theory FTPE.

(a) First proposed by John F. Muth in the early sixties, this theory holds that economic outcomes depend on what most people anticipate occurring.

Answer: **Rational Expectations**

(b) This thought experiment in game theory involves two individuals whose independent actions dictate their punishments, with both acting in their own self interest yielding worse overall.

Answer: **Prisoner's Dilemma**

(c) This is defined as the set of strategies and payoffs at which no player can change their strategy and benefit without the other players changing their strategy as well.

Answer: **Nash Equilibrium**

21. Identify the following people related to the Protestant Reformation FTPE.

(a) This man was the pope at the beginning of the Reformation, summoning Luther to Rome in 1518.

Answer: **Leo X**

(b) He debated with Luther at Leipzig in 1519 and in 1520 went to Rome to request the papal bull ordering Luther excommunicated.

Answer: **Johann Mayer von Eck**

(c) This preacher's sale of indulgences prompted Luther to post his 95 Theses.

Answer: **Johann Tetzel**

22. Identify the following Poe works FTPE.

(a) Featuring C. Auguste Dupin, this work is about a woman of royal rank blackmailed based upon the title object.

Answer: **The Purloined Letter**

(b) William Le Grand accidentally finds a cipher giving the location of a fortune on Sullivan's Island.

Answer: **The Gold Bug**

(c) Montresor lures Fortunato into a cellar, where he buries him inside a wall for revenge.

Answer: **The Cask of Amontillado**

23. Identify the following popes, FTPE.

(a) Dying suddenly after convening the Council of Basel in 1417, he presided over the final sessions of the Council of Constance, who elected him, ending the western schism.

Answer: **Martin V**

(b) Henry IV of Germany and Philip I of France were both defeated by this man, whose eloquence at the councils at Piacenza and Clermont led to the first Crusade.

Answer: **Urban II**

(c) The second son of Lorenzo de Medici, he followed Julius II, expanding upon his predecessor's conquests and expanding temporal power for the papacy.

Answer: **Leo X or Giovanni de Medici**

24. A leader of anarchism, he came to follow Communism for its component of the state withering away. FTPE

(a) name this leading Russian nihilist and author of The People's Cause.

Answer: **Mikhail Aleksandrovich Bakunin**

(b) Bakunin was an opponent of this man at the Communist International, but was expelled by this leader at the Hague Congress in 1872.

Answer: **Karl Marx**

(c) The term "nihilism" was coined by this Russian author of Fathers and Son.

Answer: **Ivan Turgenev**

25. Identify the following works by Bertolt Brecht FTPE.

(a) This ballad-opera with music by Kurt Weill is an adaptation of a John Gay work and attacks the decadent capitalist society responsible for creating the criminal underworld.

Answer: **The Threepenny Opera or Die Greigroschenoper**

(b) Three disillusioned gods come in search in the title location for a good human being, and find it in the prostitute Shen Te, who squanders the wealth because of her charity.

Answer: **The Good Woman of Setzuan**

(c) A play on a 13th century Chinese play, it opens in Russia after World War II where two communes dispute over a valley in the title mountain range.

Answer: **The Caucasian Chalk Circle**

26. Identify the following musical works that won a Pulitzer Prize FTPE.

(a) This ballet by Aaron Copeland earned the Pulitzer in 1945.

Answer: **Appalachian Spring**

(b) In 1958 Samuel Barber earned one for this opera whose libretto was written by Gian-Carlo Menotti.

Answer: **Vanessa**

(c) This 1955 work earned Gian-Carlo Menotti his Pulitzer.

Answer: **The Saint of Bleecker Street**