## Tossups

The sun god Mithras was the object of a popular religious cult in the early Roman Empire, but his birthday is now associated with another religion. A point of contention between Anglicans and other Protestants, this celebration was suppressed in Scotland and in much of New England until the 19th century. The date was undoubtedly chosen for its nearness to Epiphany, which, in the East, originally included a commemoration of the nativity. FTP identify this winter holiday associated with Yule logs and Santa Claus.

## Ans: Christmas

In the end he will be killed by Vidar, who will wield the Thickmost Shoe. The footstep of a cat, the roots of a mountain, a woman's beard, the breath of fishes, the sinews of a bear, and a bird's spittle were forged into the chain Gleipnir, which binds him. His siblings are the Midgard Serpent and Hel, and he is the eldest child of Angrbod and Loki. At Ragnarok his jaws will stretch from the earth to the heavens, and he will devour Odin. FTP, identify this monstrous wolf from Norse mythology.

## Ans: Fenrir or Fenris

A Latin Kingdom centered on this city was ruled first by the house of Bouillon and then by the Angevin dynasty. Taken for the Romans by Pompey, it became the capital of the Herod dynasty. The Gulbenkian Library, Wailing Wall, and Via Dolorosa are all found in the Old City, which is divided into the Armenian quarter, the Muslim quarter, the Christian quarter, and the Jewish quarter. FTP, name this holy city, home to the Church of the Holy Sepulcher, the Knesset, and the Dome of the Rock.

Ans: Jerusalem
Ala lapitolone?

Name's the same: the last name of an American statesman who married Lucretia Randolph, the last name of the designer of the card game NetRunner, and a pet in the Arbuckle household. The statesman was assassinated 200 days into his presidency by Guiteau, the game designer works at Wizards of the Coast, and the pet keeps trying to send his rival Nermal off to Abu Dhabi. FTP, give the common name of the 20th President, the designer of Magic: The Gathering, and the cat created by Jim Davis.

## Ans: Garfield

This work argues that temporal power is always superior to ecclesiastical power, and enraged royalists by challenging the doctrine of the divine right of kings. It argues that it is man's fear of violent death that leads to the establishment of a state, thus the basis of rule is society's surrendering of rights to the all-controlling power refered to by the title. FTP, name this most famous work of Thomas Hobbes.

## Ans: Leviathan

For an isothermal process it can be defined as the integral of dQ over T, where dQ is an infinitesimal amount of heat and T is the absolute temperature. As the absolute temperature drops to zero, it must also approach zero, according to the 3rd Law of Thermodynamics. For a quasi-static adiabatic process it doesn't change, and in irreversible processes it always increases. FTP, identify this quantity, which can never decrease in net, and measures disorder in a system.

Ans: entropy

The best opportunities to travel here come about every 26 months. The southern hemisphere exhibits broad, intense zones of alternating magnetic polarity, hinting at the presence of a past magnetic field stronger than Earth's current one. That magnetic field is now essentially gone, along with most of the atmosphere; the current atmospheric pressure is about $1 / 200$ th that of Earth. Features on this planet include the gigantic canyon Valles Marineris and the gigantic volcano Olympus Mons. FTP, name this red planet.

Ans: Mars

In math, this type of average is always less than the geometric mean, which is always less than the arithmetic mean. For two nonzero numbers $a$ and $b$, this mean is defined as the reciprocal of the arithmetic mean of the reciprocal. It also names the divergent infinite series $1+1 / 2+1 / 3+1 / 4+\ldots$ FTP, give this adjective which in physics names a type of oscillator and a type of motion, usually prefaced with simple.

Ans: harmonic

Her husband discovered the phenomenon of piezoelectricity, which she used in her own work. She drove an ambulance in World War I, and Einstein, who admired her, said she had "the soul of a herring." She was the first woman to get her PhD. from the Sorbonne, graduating summa cum laude, and later became the first woman professor there. The first to win two Nobel prizes, FTP name this famous investigator of radioactivity.

## Ans: Marie Curie

In animal cells, it involves a structure known as a cleavage furrow, while in plant cells it involves a cell plate. Together with mitosis, it makes up the $M$ phase, the shortest part of the cell cycle. It generally takes place during or shortly after telophase. FTP, identify this process which divides the cell's cytoplasm.

Ans: cytokinesis (accept cell division before "Together with mitosis")

Raised Protestant, he converted to Catholicism, reportedly saying "Paris is worth a mass." Initially the King of Navarre, he married the sister of the King of France. He fought and won the War of Three Henrys to win the French crown. FTP, what first Bourbon monarch of France later issued the Edict of Nantes?

## Ans: King Henry IV of France or King Henry III of Navarre

In August, President Bush limited federal funding in this field to studies using only leftovers at fertility clinics. All blood cells differentiate from a population of these cells present in red bone marrow. FTP, identify these primitive cells, which are sometimes taken from human embryos, but not from the shafts of flowers.

Ans: stem cells

The illegitimate son of an astrologer and a Welsh farm girl, he grew up in poverty in the slums of Oakland. He was an oyster pirate, a gold-seeker in the first Klondike rush, a newspaper correspondent during the Russo-Japanese War, and in 1914 became a war correspondent in Mexico. His works include The Cruise of the Snark, John Barleycorn, To Build a Fire, The Iron Heel, and The Son of the Wolf: Tales of the Far North. FTP, name this author of The Sea-Wolf, White Fang, and The Call of the Wild.

Ans: Jack London

While he was in medical school he had to earn money to help support his family, so he began contributing stories, short sketches, and jokes to journals and papers. His stories include The Black Monk, Peasants, and Ward No. 6. He is better known as a playwright, and his major plays include The Three Sisters and The Seagull. FTP, identify this Russian author of Uncle Vanya and The Cherry Orchard.

Ans: Anton Chekhov

This poem in dactylic hexameter was the inspiration for modern works by Nikos Kazantzakis, Tennyson, and James Joyce. It has been called the first novel, because of its exciting narrative and the effective use of flashbacks to heighten the dramatic action. Episodes include encounters with the Laestrygonians (lay-stri-GO-nee-ans), Aeolus, the Lotus-eaters, Scylla and Charybdis, the Sirens, and the cyclops Polyphemus. FTP, name this Homeric epic focused on a Greek hero who finally reunites with Penelope in Ithaca.

Ans: Odyssey

Her only responsibility is to care for her indulgent, hypochondriac father. She interferes in the courtship of Jane Fairfax and Frank Churchill, after unsuccesfully attempting to match up Harriet Smith and Mr. Elton. She finally admits her own love for Mr. Knightly
after snapping at Miss Bates. FTP, name this title heroine of a Jane Austen novel which inspired the movie Clueless.

## Ans: Emma Woodhouse

Characters in his works include a crude stoker named Yank, a Swedish captain named Chris Christopherson, and a former Pullman porter named Brutus Jones who sets himself up as emperor on an island in the West Indies. His plotlines include a retelling of the myth of Orestes set in New England, and the conversations of a group of derelicts in the End of the Line Café. FTP, name this American playwright, author of Mourning Becomes Electra, The Iceman Cometh, and Long Day's Journey Into Night.

## Ans: Eugene O'Neill

This composer of the Coffee Cantata was married twice and had twenty children. After becoming musical director at St. Thomas, he composed his Magnificat. His children include the musicians Wilhelm Friedemann, Johann Christian, and Carl Philipp Emanuel. FTP, identify this German composer of The Well-Tempered Clavier, The Art of the Fugue, the St. Matthew Passion, and the Brandenburg Concertos.

Ans: Johann Sebastian Bach

His paintings include the Rokeby Venus, The Surrender of Breda, and a portrait of Pope Innocent $X$ that inspired a series of paintings by Francis Bacon. After he was awarded membership in the Order of the Knights of Santiago, he added the red cross of the order to his costume as shown in his most famous painting. In 1623 he became court painter to Philip IV, painting several portraits of the royal family, including a depiction of the Infanta Margarita with her maids. FTP, name this painter of Las Meninas.

## Ans: Diego Rodríguez de Silva y Velázquez

Its official climbing season is from July 1 to August 27. Two people died on one of its climbing trails last year, although in general it is a very safe climb, as its last eruption was in 1707 , from a vent on the southeast side of the cone. A sacred mountain and pilgrimage site, it is located in central Honshu west-southwest of Tokyo. FTP, name this volcano, Japan's largest.

## Ans: Mount Fuji or Fuji-san or Fuji-no-yama or Fuji-yama

He was a delegate to the First and Second Continental Congresses and served as a diplomat in France and Holland during the Revolutionary War. Of his most famous job, he said, "My country has in its wisdom contrived for me the most insignificant office that ever the invention of man contrived or his imagination conceived." FTP, name this man who weathered the XYZ Affair, the second President of the United States.

## Ans: John Adams

Named after an American Naval research vessel that sailed the Atlantic and Pacific oceans during the 1870's, it was the second orbiter to become operational at Kennedy Space Center. Built by Rockwell, it underwent 11 months of extensive vibration testing. It successfully completed nine missions, but on the tenth, 73 seconds after lift-off, the shuttle and its seven member crew were lost. FTP, name this shuttle aboard which Christa McAuliffe lost her life on January 28, 1986.

Ans: Challenger

This war's major battles included Queenston, Raisin River, Lundy's Lane, Cryslers Farm, Hersestrecze 1 ? Chippewa, Baltimore, Lake Champlain, Lake Erie, Thames, and the Battle of New Orleans. FTP, name this war, named for the year in which it stagted 29 years after the end of the Revolutionary War.

Ans: War of 1812
In the seventeenth century, Jesuits returning from South America introduced a cure for one type of this disease to Europe. This effective remedy was suspect to Protestants because the remedy had been found by Jesuits, and the Protestant Oliver Cromwell refused the "popish" remedy when he was dying of this disease. FTP, name this disease, cause of the White Man's Grave in Africa, which is cured by quinine and whose name means "bad air."

Ans: malaria

It bears a startling resemblance to the National Air and Space Museum, and puts the spring in Springfield and the extra arms on Vishnu. Mayor Quimby tried to dismiss it as a "bawdy house and its small clientele of loyal perverts." The emcee is Mel Zetz and it is run by Belle. FTP, identify this burlesque house, whose name doesn't really translate to "Back House."

Ans: Maison Derriere

I shouldn't have let you go, and now you're out of sight. Show me how you want it to be, tell me baby, 'cause I need to know. My loneliness is killing me, and I must confess I still believe. When I'm not with you, I lose my mind. Give me a sign-buzz in and, FTP, name the Britney Spears song these lyrics come from.

Ans: One More Time (prompt on Britney Spears before mention in the question)

Bonii

Identify the following Roman deities 5-10-15.
5) He was the god of horse-racing, horses, and the sea. He was equated with the Greek god Poseidon.

## Ans: Neptune

10) One of the few important Roman gods not identified with a Greek god, he was the god of gates and doors, beginnings and endings. The gates of his temple were kept open in times of war and were only closed in times of peace. He had two faces, one looking into the future and the other into the past.

Ans: Janus
15) Also known as Magna Mater and the Mother of the Gods, her cult was directed by eunuch priests called Corybantes. She was the goddess of nature and fertility, and her Greek counterpart was the Titaness Rhea.

Ans: Cybele

Answer the following questions on the Arabian Nights FTSNOP.
5) This poor woodcutter sees a band of forty thieves enter a cave by saying the magic words "Open Sesame," and later steals the thieves' treasure.

Ans: Ali Baba
5) This poor young man is given a magic ring with a servant genie by an evil magician, who wants to use him to retrieve a magic lamp with a more powerful servant genie. This young man keeps the ring and the lamp, marries the sultan's daughter, and kills the magician.

Ans: Aladdin
5) This sailor takes seven voyages, encountering rocs, which are giant birds, and the Old Man of the Sea.

Ans: Sindbad or Sinbad
15) This daughter of the Grand Vizier becomes the wife of Sultan Schahriar and tells him the stories of the Arabian Nights.

Ans: Scheherazade

Identify the following people from Arthurian legend FTSNOP.
$5 ; 15)$ In some versions of Arthur's story, he is brought up in a foster home. Five for one, fifteen for both, name his foster brother and foster father.

Ans: Sir Kay (foster brother), Sir Ector (foster father)
5;15) Five for one, fifteen for both, name Arthur's true parents.
Ans: Uther Pendragon and Igraine

Given the state, name its capital, F5PE.
5) Wyoming

Ans: Cheyenne
5) Nevada

Ans: Carson City
5) Vermont

Ans: Montpelier
5) North Dakota

Ans: Bismarck
5) Kentucky

Ans: Frankfurt
5) New Mexico

Ans: Santa Fe

Recently, the Supreme Court of Georgia struck down a method of capital punishment in a 4-3 decision. Answer these questions about the ruling, FTPE.
10) Which method was outlawed by the decision, which itself replaced hanging in 1924 ?

Ans: electrocution (or electric chair or close alternates)
10) What has now become the default method of execution?

Ans: lethal injection (or close alternates)
10) Name either of the only two states left that use electrocution as the sole method of capital punishment.

Ans: Alabama or Nebraska

30-20-10: Give the common last name.
30) Hiram Reynolds was a California landscape and portrait artist who died in 1911.
20) It is the maiden name of Betty Ford, former President Gerald Ford's wife.
10) Amelia, born in 1818, worked for women's rights; her name is given to an item of clothing that she called "pantalettes".

Ans: Bloomer

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\frac{5-10-15}{}
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Given the President, name his domestic program, FTSNOP.
5) Franklin Delano Roosevelt

Ans: New Deal
10) John F. Kennedy

Ans: New Frontier
15) Lyndon B. Johnson

Ans: Great Society

The British landed on three beaches on D-Day. Name them FTPE. If you need easier clues you will receive five points.
5) It is element number 79, and its symbol is Au.

Ans: Gold
5) She was the wife of Jupiter, and the Roman equivalent of Hera.

Ans: Juno
5) One of these was pulled from a stone by the boy who would become King Arthur.

Ans: Sword

Name these famous Mongol conquerors 5-10-15.
5) This most famous Mongol leader conquered flelt the greatest land empires the world has ever known before his death in 1227. CE

Ans: Genghis Khan or Jenghiz Khan or Temu-jin
10) According to Coleridge, he erected a pleasure dome in Xanadu. He founded the Yuan dynasty after conquering China.

Ans: Kubla Khan or Kublai Khan
15) Claiming to be a descendant of Genghis Khan, he made his capital at Samarkand and conquered a vast empire, capturing Persia and portions of Russia and Asia Minor. He was the subject of a Christopher Marlowe play.

Ans: Tamerlane or Tamburlaine or Timur Leng or Timur the lame or Tamur leng or Tamur the lame

Identify the European monarch 30-20-10.
30) Until 1527 he firmly opposed the Reformation, and received the title "Defender of the Faith" from Pope Leo X for his treatise against Luther.
20) When the pope would not annul his marriage to Katharine of Aragon, he established the Anglican Church, put himself in charge, divorced Katharine and married Anne Boleyn.
10) This English king was married six times, executed two of his wives, and was the father of Queen Elizabeth.

## Ans: Henry VIII

Identify the following Hitchcock films from plot summaries FTPE.
10) An old college friend hires retired San Francisco police detective Scottie Fergusson to watch his wife Madeleine, who has become obsessed with the past. Scottie was forced to retire after developing an acute fear of heights.

## Ans: Vertigo

10) Based on a Daphne Du Maurier story, this film offers no explanation why the residents and visitors of Bodega Bay, California, are besieged by half the avian kingdom.

## Ans: The Birds

10) Aspiring taxidermist and hotel manager Norman Bates thinks he's Mom. Mom likes to wear a dress and wig, carries a big knife, and violently objects to any woman Norman encounters. So after Norman has dinner with Marion Crane, Mom has to kill her while she's showering.

Ans: Psycho

It's all about the blood flow. FTSNOP, identify these parts of the circulatory system.
$\left.\operatorname{gon}_{1} 15\right) 5$ for two, 15 for all three, name the three types of blood vessels found in the human body.

Ans: Veins, capillaries, arteries
5) Identify the largest artery in the human body, which supplies oxygenated blood to the entire body except the lungs.

Ans: Aorta
10) For 5 points each, identify the two types of chambers in the human heart.

Ans: Atrium or atria, ventricles

Seth's sock drawer has 6 pairs of black socks, 4 pairs of brown socks, and 10 pairs of thermal socks. Answer the following questions 5-10-15. Assume all socks are replaced in the drawer between questions.
5) Seth wants to wear a pair of thermal socks, but he's feeling too lazy to grab more than one pair. If Seth reaches into the drawer randomly, what is the probability that the first pair he pulls out will be thermal socks?

Ans: $\underline{\mathbf{1 / 2}}$ or $\underline{\mathbf{5 0} \%}$ (accept clear equivalents)
10) Seth decides he absolutely must wear thermal socks. If Seth randomly pulls out pairs of socks without looking, how many pairs must Seth pull out to guarantee that he has grabbed at least one pair of thermal socks?

Ans: 11
15) What basic mathematical principle is illustrated in the last question?

## Ans: Pigeonhole Principle or Dirchlet's Box Principle

Identify the following physical quantities from description 5-10-15.
5) Often symbolized $n$, this quantity which appears in Snell's Law is the ratio of the speed of light in a vacuum to the speed of light in a particular material.

Ans: index of refraction
10) For most materials it is equal to the square of the index of refraction. It is the factor by which the capacitance increases when an empty capacitor is filled with a particular material.

Ans: dielectric constant
15) Its value is one over the square root of the product of permeability and permittivity. Ans: speed of light

Answer the following questions about water FTSNOP.
5) How much does 2 moles of water weigh in grams?

Ans: 36 grams (accept anything between 36 and 36.04 grams)
5) What is the density of water measured at room temperature and at average atmospheric pressure near sea level, in grams per cubic centimeter?

Ans: 1 gram $/ \mathrm{cm}^{3}$
10) The oxygen and hydrogen atoms share electrons unequally, resulting in a net positive charge on the hydrogens and a net negative charge on the oxygen. What sort of bond is present between the oxygen and hydrogen atoms in the molecule?

Ans: polar covalent (prompt on covalent)
10) Depending on reaction conditions, water can act as a base or as an acid, meaning that it is what sort of substance?

Ans: amphoteric

Identify the following igneous rocks F15PE.
15) The intrusive equivalent of rhyolite, this felsic rock is one of the most abundant intrusive igneous rocks. It contains abundant quartz and feldspar, which give it its pink or gray color, and contains small amounts of micas and amphibole, which show up as dark flecks.

Ans: granite
15) This dark gray to black mafic rock is the extrusive equivalent of gabbro. It is the most abundant igneous rock of the crust and underlies virtually all the floors of the oceans. It also is present in some places on continents as thick and extensive sheets making up large plateaus, such as the Columbia River plateau in Washington state.

Ans: basalt

Identify the following 20th century American composers FTPE.
10) The brother of Ira, he composed An American in Paris, Porgy and Bess, and Rhapsody in Blue.

Ans: Gedge Gershwin
10) He composed the Kaddish Symphony and the musicals Candide and West Side Story. He also first conducted the New York Philharmonic-Symphony Orchestra in 1943, and from 1958 to 1970 was its musical director.

Ans: Leonard Bernstein
10) A pupil of Nadia Boulanger, he composed the ballets Billy the Kid, Rodeo, and Appalachian Spring.

## Ans: Aaron Copland

30-20-10 Identify the common title word.
30) The second track of Led Zeppelin III, the bass line for this song comes from Holst's Mars, the Bringer of War.
20) It's part of the title of a 2001 movie starring Zoe Saldana, Taryn Manning, Justin Long, and Britney Spears. The title is "What Are (blank) For".
10) The TV show of this name stars Courtney Cox Arquette, Matthew Perry, Lisa Kudrow, Matt LeBlanc, Jennifer Anniston, and David Schwimmer.

Ans: Friends

Identify the following Shakespeare plays from characters FTPE.
10) Macduff, Fleance, Banquo

Ans: Macbeth
10) Tybalt, Mercutio, Nurse

Ans: Romeo and Juliet
10) Theseus, Titania, Demetrius, Puck

Ans: Midsummer Night's Dream

Rape and incest may not seem like the stuff of great literature, but they do find their way into some classic novels. F15PE, identify the following novels.
15) In this Thomas Hardy novel, the title character is raped by her cousin Alec.

Ans: Tess of the D'Urbervilles
15) In this Toni Morrison novel, Pecola Breedlove is raped by her father Cholly.

Ans: The Bluest Eye

Identify the American authors of the following short stories.
10) The Bride Comes to Yellow Sky, The Blue Hotel, The Open Boat

Ans: Stephen Townley Crane
10) The Killers, The Short Happy Life of Francis Macomber, The Snows of Kilimanjaro

Ans: Ernest Miller Hemingway
10) The Minister's Black Veil, Rappaccini's Daughter, Young Goodman Brown.

## Ans: Nathaniel Hawthorne

Answer the following questions about a poem FTPE.
10) What poem includes the lines "Old age should burn and rave at close of day; Rage, rage against the dying of the light."?

Ans: Do not go gentle into that good night
10) What Welsh poet wrote Do not go gentle into that good night?

## Ans: Dylan Thomas

10) Do not go gentle into that good night consists of five tercets and a closing quatrain, making it an example of what type of poem?

Ans: Villanelle

Identify the country of birth of the following authors F10PE.
10) Gabriela Mistral, Pablo Neruda

Ans: Chile
10) Rabindranath Tagore, Rudyard Kipling

Ans: India
10) Yukio Mishima, Kawabata Yasunari

Ans: Japan

Given a conjugated Spanish verb, give the infinitive 5-10-15.
5) caminas (Cah-MEE-nahss)

Ans: caminar
10) tenían (ten-EE-ahn)

Ans: tener
15) he hecho (EH E-choh)

Ans: haber hecho

Identify the following musicians that Jimmy Page tried to recruit when he was forming Led Zeppelin on a $15-10$ basis.
15) Jimmy Page hoped that this vocalist and keyboard player would join him. This musician cut his teeth in the Spencer Davis Group, which had hits with "I'm a Man" and "Gimme Some Lovin"".
10) He had already been in the groups Blind Faith and Traffic.

Ans: "Little" Stevie or Steve Winwood
15) Jimmy Page tried to recruit this drummer. Supposedly, he and John Entwhistle came up with the name Led Zeppelin.
19) He played in the Who.

Ans: Keith Moon

