

### TOSSUP 1

Though he is not seen until book two, he is often considered the main character of the novel in which he appears. He is a barrister who helps to defend a man wrongly accused of treason. After the trial he reveals to the man that he is miserable and that he has wasted his life. He later tells this to Lucie Manette, adding that she is his only friend and that he would do anything to save “a life she loves.” FTP, name this character from “A Tale of Two Cities” who fulfills that promise when he switches places with Charles Darnay in prison and is put to death in his place.

**Sydney Carton** (Accept either)

### BONUS 1

Name these other characters from A Tale of Two Cities, FTPE.

- 10: When the book begins, this character is traveling to Dover from London. He is an employee of Tellson’s Bank.

**Jarvis Lorry**

- 10: This character describes himself as a “resurrection man,” someone who digs up bodies from graves and sells them to science.

**Jerry Cruncher**

- 10: This character keeps a register of enemies of the French Revolution in a cloth which she is always knitting. She has a personal hatred of Charles Darnay.

**Madame Therese Defarge**

### TOSSUP 2

A rectangle with sides 10 and 24 is inscribed in a circle such that all four corners are on the circle. To find the perimeter of the circle, remember that the diagonal of the rectangle will be the diameter of the circle. The diagonal can be found using the Pythagorean Theorem, and the perimeter can be found from the diameter. FTP what is the perimeter of the circle? You will have 10 seconds.

$26\pi$

### BONUS 2

FTPE find the area of the following circles.

- 10: A circle with diameter 10.

$25\pi$

- 10: A circle inscribed in a square of area 16.

$4\pi$

- 10: A circle whose radius is half of that of a circle with area  $20\pi$ .

$5\pi$

### TOSSUP 3

According to a prophecy, he and his siblings would cause trouble for the gods, so the gods decided to dispose of them. His siblings were banished to various realms, but Odin decided to bind him. After trying twice to unsuccessfully do so, Odin had dwarves forge a nearly unbreakable chain which proved too strong. He is bound on the island of Lyngvi until Ragnarok. Once Ragnarok begins she will grow too big for his bonds and break free. FTP, name this Norse wolf who will then devour Odin and be slain by Vidar.

**Fenrir** (also accept **Fenris wulf** or **Fenris**)

### BONUS 3

FTPE name these other Norse mythological creatures.

- 10: This squirrel runs up and down the tree Yggdrasil [EEG-drah-sil] and brings insults back and forth to Nidhoggr and the eagle at the top of the tree.

**Ratatosk**

- 10: This serpent, a sibling of Fenrir, will kill and be killed by Thor at Ragnarok.

**Jormungandr** [YOR-mun-gand] (prompt on **World Serpent** or **Midgard Serpent**)

- 10: This greatest of all dogs (except for Fenrir) guards Hel, and will kill and be killed by Tyr at Ragnarok.

**Garm**

### TOSSUP 4

In recent years, this organelle has been discovered to play a role in cell cycle regulation, senescence, and silencing genes. Prominent in neurons and embryonic cells, unlike surrounding areas, it does not stain by the Feulgen reaction. Its major function is the production of 28S, 18S, and 5.8S rRNA, used in the assembly of ribosomes. FTP, name this knot of chromatin and subdivision of the nucleus.

**nucleolus**

### BONUS 4

Name these other organelles or membranous systems, FTPE.

- 10: This organelle has double-layered outer membrane, inside folds called cristae, and a liquid gap in between that is referred to as the matrix.

**mitochondria**

- 10: This system consists of flattened sacs, cisternae, and has 2 faces, the cis and trans. It functions in transporting vesicles to and from the ER into the plasma membrane.

**Golgi apparatus** or **bodies**

- 10: This plant organelle is enclosed by two membranes separated by an intermembrane space, which encloses a fluid called stroma which surrounds stacks of thylakoids.

**chloroplasts**

TOSSUP 5

A rapid winter campaign by the aggressor and the subsequent riposte at Mollwitz ended the first year; what would have merely been a small Central European conflict in the neighborhood of Breslau turned into the first general Continental war in a generation. The victories by the Imperials following the withdrawal of the original antagonist saw that antagonist, Frederick the Great, return and land the final victories at Hohenfriedberg and Kesselsdorf. FTP name this war from 1740 to 1748, fought over the succession of Maria Theresa to the Habsburg throne due to the Pragmatic Sanction.

**War of the Austrian Succession**

BONUS 5

FTPE name these children of Maria Theresa.

- 10: She married the Dauphin Louis of France, later Louis XVI, and was later guillotined by the Revolutionaries in 1793.

**Queen Marie Antoinette of France and Navarre (accept Maria Antonia Josefa Johanna)**

- 10: He was his mother's co-ruler until the last ten years of his life, when she died and he became Emperor. He was known for passing many liberal reforms and was called the only real Enlightened despot.

**Josef II, Holy Roman Emperor**

- 10: Holy Roman Emperor following Josef II, he only reigned for two years before his death in 1792.

**Leopold II, Holy Roman Emperor**

TOSSUP 6

The region's unique geography has given rise to the Gulf of Kotor, Skadar Lake, and Bobotov Kuk, the tallest mountain in the country. During World War I, it was occupied by Austro-Hungarian troops and from then on was not an independent state. Bordering on the Adriatic Sea, it declared its independence from Serbia following a referendum in 2006. FTP, name this breakaway Yugoslav republic whose name translates to "black mountain."

**Montenegro**

BONUS 6

FTPE, name these other young countries.

10: Beginning as a colony of Portugal, this country declared independence from Indonesia in 2002.

**East Timor** (also accept **Timor-Leste**)

10: In 1993, this country broke off from Ethiopia, thus landlocking it.

**Eritrea**

10: This Polynesian nation became independent in 1994.

**Palau**

TOSSUP 7

Six colors suffice to color any map on this type of surface, the only exception to the Heawood conjecture. If the figure is halved along its plane of symmetry, the result is a famous strip. It is possible to go from the inside of this figure to the corresponding point on the outside without passing through the surface. FTP, what is this object, named after the German mathematician that discovered it?

**Klein bottle**

BONUS 7

BONUS FTPE answer the following questions about the Klein bottle.

10: When two of these strips are put together, a Klein bottle is created.

**Mobius strip**

10: The Heawood conjecture is an extension of this other theorem, which was proved brute-force by a computer program.

**Four color theorem**

10: This branch of mathematics that deals with stretching surfaces is sometimes called rubber-sheet geometry.

**Topology**

TOSSUP 8

The artist, despite not actually having seen the scene painted, had visited the place the day before. It doesn't show any trace of the affliction the subject had from his celiac disease, as the artist wished to portray his friend as an idealized martyr. Lying in his medicinal tub, the subject is holding a letter, on which the name of his assassin is written. FTP name this David work, widely used as a symbol of the French Revolution.

**The Death of Marat**

BONUS 8

FTPE name these other works by Jacques-Louis David.

- 10: It portrays three brothers, swearing loyalty to Rome before their battle with the Curiatii of Alba Longa.

**The Oath of the Horatii**

- 10: This painting was commissioned by the subject to show the leadup to his victory at Marengo in 1800.

**Napoleon Crossing the Alps**

- 10: It portrays the September 480 BCE battle between the Spartans and their allied Locrians and the Persian invading armies, now a subject of the movie 300 .

**Leonidas at Thermopylae**

TOSSUP 9

His most famous work is dedicated to Theophile Gautier [THAY-o-feel GOW-tee-ay]. However, he started out by writing art reviews and then participated in the Revolution of 1848. Nerval, Flaubert, and Balzac were all his friends and were studied by him. His magnum opus calls Satan "thrice-great" and he was greatly influenced by the work of Edgar Allen Poe. FTP, name this French decadent poet of the 19th century who wrote *Les Fleurs du mal* .

**Charles Baudelaire**

BONUS 9

Translate these parts of Les Fleurs de Mal from French to English.

- 10: Les Fleurs de Mal

**The Flowers of Evil**

- 10: Le Vin

**Wine**

- 10: La Mort

**Death**

TOSSUP 10

In his teens he was a member of the National Party, then a minor political group. During World War II, he helped form a pro-Nazi paramilitary group that opposed his country's support for the British and other Allied powers. In 1948, his party won the general election in a surge of Afrikaner nationalism and he was elected to the lower house of Parliament. He later became the minister of colored affairs and was elected prime minister in 1978. He eventually repealed restrictive laws such as a ban on interracial marriage and conducted a goodwill tour of Europe in 1984, but it did little to change his country's pariah status. FTP, name this leader of apartheid-era South Africa who led his country into deepening political crisis and racial violence as head of state until 1989.

**P.W. (Pieter Willem) Botha**

BONUS 10

FTPE name these contemporary countrymen of Botha:

10: He rose from a position as an Anglican parish priest to become the first black bishop of Johannesburg in 1984:

**Archbishop Desmond Tutu**

10: He directed a twenty-year campaign of defiance against the South African government before he was sentenced to life imprisonment in 1964, but was released in 1990:

**Nelson Mandela**

10: He succeeded Botha as leader of South Africa and shared the Nobel Prize for Peace with Mandela in 1993 for his work in dismantling apartheid:

**F.W. (Frederik Willem) deKlerk**

#### TOSSUP 11

Her family was poor, but her mother gave birth to eleven children. She trained as a nurse and helped many women give birth. After her marriage, she moved to New York City and reported about health for a magazine. She believed that women should have economic and social equality with men, and was disturbed by the suffering caused by unwanted pregnancies. In 1916, she opened a medical office in New York, the purpose of which was to provide women with ways to prevent pregnancies, a process which she called birth control. FTP, name this founder of the world movement called International Planned Parenthood.

**Margaret Sanger**

#### BONUS 11

FTPE, identify these activists for women's rights:

10: She created the National Women's Party to support equal rights for women in 1916 and proposed the first Equal Rights Amendment to Congress in 1923.

**Alice Paul**

10: Elected to Congress in 1970 to represent New York, she presented the first bill in Congress for equal rights for gay people and was known for her large hats.

**Bella Abzug**

10: She formed the National Organization for Women and wrote The Feminine Mystique .

**Betty Friedan**

#### TOSSUP 12

As a teenager, he was discouraged from studying law or medicine by his family and instead adopted meteorology. Following his first book "Meteorological Observations and Essays", he extended his beliefs about weather to chemistry, which eventually led to his law of partial pressures. FTP, name this man, credited with creating the modern Atomic Theory in 1804.

**John Dalton**

BONUS 12

FTPE, name these other scientists who contributed to the study of the atom.

10: This man is credited with the discovery of the electron.

**J.J. Thomson**

10: This German found the existence of the proton.

**Eugen Goldstein**

10: This English scientist discovered the neutron.

**James Chadwick**

TOSSUP 13

A House committee was appointed in 1979 to investigate it, and it issued a report criticizing the FBI and the CIA. The Dictabelt tape, which was taken off a motorcycle in Dealey Plaza, proves, according to another committee, the existence of a second party. Following his most heinous deed, the perpetrator killed police officer J.D. Tippit. Caught on the Zapruder film, this is, FTP, what event investigated by the Warren Commission in 1963, resulting in the capture of Lee Harvey Oswald?

**John F. Kennedy assassination**

BONUS 13

Answer the following about the assassination of Robert Kennedy, brother of the President, FTPE.

10: This was the repetitive name of Kennedy's killer.

**Sirhan Sirhan**

10: He was killed in this Los Angeles hotel, home of the Coconut Grove nightclub and starting point of the careers of Bing Crosby and Richard Pryor, among others.

**The Ambassador Hotel**

10: Growing evidence presented by lawyer Lawrence Teeter suggest that Sirhan was under the influence of this CIA mind-control project headed by Dr. Sidney Gottlieb.

**Project MKULTRA**

TOSSUP 14

His poetry reflects a deep but ultimately tragic love for his native land, as in his poem "Two homelands," where he compares his island home to a widow in the night holding a flower that is his heart, leaving his chest empty. An active rebel soldier, he died in a skirmish with Spanish troops when he refused to retreat. FTP, name this Cuban nationalist poet of "Guantanamo."

**Jose Marti**

BONUS 14

Identify these Latin American poets FTPE.

- 10: This feminist Puerto Rican wrote a poem criticizing her public self as shallow, unlike her poetic self, a creative spirit and friend of the people.  
**Julia de Burgos**
- 10: This much-loved Chilean communist poet is most famous for his collection *Twenty Love Poems and a Song of Despair* .  
**Pablo Neruda**
- 10: This Nicaraguan is widely viewed as the father of Modernism; his poem *To Roosevelt* attacks American imperialism.  
**Ruben Dario**

TOSSUP 15

It begins with a crowd of man-like women arguing that the punishment should have been death or branding on the forehead. The punished protagonist is forced to stand on a scaffold, where she recognizes her husband in the crowd. He makes her promise not to reveal his identity, but seven years later she tells her lover, Arthur Dimmesdale, who he is. FTP, name this Nathaniel Hawthorne work, in which Hester Prynne is forced to wear the titular symbol upon her breast.

**The Scarlet Letter**

BONUS 15

Name these characters from the *Scarlet Letter* FTPE.

- 10: He is Hester's husband, long believed to be dead.  
**Roger Chillingworth**
- 10: The daughter of Hester and Dimmesdale.  
**Pearl**
- 10: The witch sister of the governor, she repeatedly asks Hester to join her in the forest.  
**Mistress Hibbins**

TOSSUP 16

Ysalamiri created a bubble of one meter in radius devoid of this as a defense mechanism against the vornskr, a predator that hunts with it. The Yuuzhan Vong were not in contact with it until recently, when they were returned to Zonama Sekot. It is a matter of G-level canon that there is a certain duality to this, like Taoism: a dark side and a light side. FTP name this energy field in all living things that "surrounds us and penetrates us and binds the galaxy together".

**The Force**

BONUS 16

FTPE name these Force users who dabbled on both the light and the dark sides of the Force.



- 10: He was a Jedi Knight until age 22, when he assisted Darth Sidious in the destruction of the Jedi Order and took the mantle of Darth Vader.  
**Anakin Skywalker**
- 10: The man who refounded the Jedi Order following the Battle of Endor and who also destroyed the first Death Star mostly stayed on the light side, but briefly became apprentice to the reborn Emperor.  
**Luke Skywalker**
- 10: Originally an Emperor's Hand with the mission to kill Luke Skywalker, she eventually married him and became a Jedi Master.  
**Mara Jade Skywalker (prompt on either part of the name)**

TOSSUP 17

In 2005 he discussed the legalization of marijuana. He was a known critic of the Phillips curve and a recipient of the John Bates Clark medal. As a young Treasury Department employee he advocated Keynesian economics before switching his economic allegiances to eventually advocate lower taxes and the negative income tax. He implemented his economic principles in Augusto Pinochet's Chile and wrote *Capitalism and Freedom*. FTP, name this famous monetarist of the University of Chicago who died in 2006.

**Milton Friedman**

BONUS 17

Name these economists:

- 10: He proposed the Iron Law of Wages.  
**David Ricardo**
- 10: He developed the principle saying that population increases linearly while population increases geometrically.  
**Thomas Malthus**
- 10: This author of Theory of the Leisure Class theorized that people buy expensive things because those things are status symbols.  
**Thorsten Veblen**

TOSSUP 18

The last occurred on June 8, 2004, and the next will be on June 6, 2012. Before that pair, the last were in 1874 and 1882, and the next two will occur in 2117 and 2125. Between pairs there is a period of either 121.5 years or 105.5 years, making the pattern repeat every 243 years. As with eclipses, the safest way to observe them is to project a telescope image of the Sun onto a screen. FTP, name this visible movement of our solar system's second planet directly between the Earth and the Sun.

**Transit of Venus**

BONUS 18

FTPE, name these other astronomical phenomena.

10: Caused whenever a periodic comet moves by the Sun, they are characterized by many bright lights streaking through the sky.

**Meteor Showers**

10: One of the most famous comets, it returns every 75 to 76 years and will return in 2061.

**Halley's Comet** (also accept 1P/Halley)

10: Discovered by Giuseppe Piazzi in 1801, it is the largest asteroid in the asteroid belt and was named for a Roman Goddess.

**1 Ceres**

TOSSUP 19

His influential modernist music incorporated atonality, the octatonic scale, and polymodal chromaticism. A liberal, his views were most prominently expressed in his only opera, Bluebeard's Castle. Some of his more famous works include the Two Romanian Folk Dances, Piano Concertos 2 and 3, and Mikrokosmos [MIK-ro-kosmos]. FTP, name this 20th century Hungarian composer, one of the founders of ethnomusicology.

**Bela Bartok**

BONUS 19

Name these other 20th century composers FTPE.

10: Born in the Ukraine, some of his famous works include Peter and the Wolf and the ballet Cinderella.

**Sergei Prokofiev**

10: The most famous of the 20th century British composers, some of his works include the War Requiem and The Young Persons Guide to the Orchestra.

**Benjamin Britten**

10: One of the most famous composers of the Soviet era, his well-known works include his Seventh Symphony (Leningrad) and Song of the Forests.

**Dmitri Shostakovich**

TOSSUP 20

Isolated in 1808 by Sir Humphrey Davy, this element is commonly used in the extraction of metals such as zirconium and thorium and in the production of aluminum, copper, and lead. Solid at room temperature, it is the fifth most abundant element in the Earth's crust. This element does not appear naturally in its elemental state, and is found commonly in stalagmites. Most importantly, it is the major component in animal bones and teeth. FTP, name this alkali earth metal, with atomic number 20.

**Calcium**

BONUS 20

FTPE, name these other alkali earth metals.

- 10: Highly flammable, name this element with atomic number 12.  
**Magnesium**
- 10: Contained in the precious stone emerald, this element has atomic number 4.  
**Beryllium**
- 10: Very reactive to air, this element is used in cathode ray tubes and has atomic number 38.  
**Strontium**