



1. Reference frames that lack this property may be subject to so-called "fictitious" forces. Special relativity only applies to reference frames with this property, which must be non-accelerating. A rotational quantity named for this property is equal to $M R$ -squared for a point mass and is known as its (*) "moment." Aristotle misunderstood this concept, which allows for objects to keep traveling in straight lines. For 10 points, name this topic of Newton's first law, the tendency of a body to resist a change in motion.

ANSWER: inertia [or word forms such as inertial; prompt on non-accelerating until it is read]

132-14-102-14101

BONUS: What figure of speech compares two incongruent things using the word "like" or "as"?

ANSWER: simile

014-14-102-1410-11

2. This compound inhibits prolactin secretion when it is released from the tubero-infundibular pathway. The enzyme tyrosine hydroxylase plays a key role in this neurotransmitter's synthesis. The mesolimbic and mesocortical pathways of the brain both use this neurotransmitter. Depletion of this neurotransmitter in the (*) substantia nigra (NYE-gruh) leads to a disease characterized by shaking and other issues with movement. For 10 points, identify this neurotransmitter whose deficiency is a cause of Parkinson's disease.

ANSWER: dopamine

126-14-102-14102

BONUS: What leader of the Christian Democratic Union became the first Chancellor of West Germany?

ANSWER: Konrad Adenauer

014-14-102-1410-11

3. This state hosts a unique boat-based extension of the U.S. Postal Service, which brings mail to residents along the Magnolia River. The largest cast-iron statue in the world is found in this state and depicts Vulcan, honoring the steel industry here. Its city of Enterprise hosts a memorial to the end of (*) cotton cultivation, the Boll Weevil Monument. For 10 points, name this state where NASA's Marshall Center is in Huntsville and the Vulcan statue stands in Birmingham.

ANSWER: Alabama

019-14-102-14103

BONUS: What scale of hurricane strength classifies hurricanes into categories one through five based on wind speed?

ANSWER: Saffir-Simpson scale

014-14-102-1410-11

4. This artist first attracted notice when sixteen of his paintings were shown at the Whitney Studio Club. A secretary rushes to pick up dropped papers in this artist's *Office at Night*, which along with his image featuring a single barber pole, (*) *Early Sunday Morning*, captured the sense of urban isolation. In his most famous painting, a sign for Phillies cigars is displayed on the exterior of a late-night diner serving three people. For 10 points, name this American painter of *Nighthawks*.

ANSWER: Edward Hopper

004-14-102-14104

BONUS: Name the poet who wrote "One short sleep past, we wake eternally," in the tenth of his *Holy Sonnets*, "Death, Be Not Proud."

ANSWER: John **Donne**

014-14-102-1410-11

5. **Glenn Frank was instrumental in saving lives during this event by persuading people to leave the scene. A Pulitzer-winning photograph taken during this event by John Filo depicts Mary Vecchio kneeling over the body of Jeffrey Miller. This event was the subject of Neil Young's (*) anti-war song "Ohio."** Three years after this event, the eight National Guardsmen who opened fire were acquitted on the grounds of self-defense. For 10 points, name this 1970 shooting on a college campus in Ohio, which prompted a student strike against the Vietnam War across the country.

ANSWER: **Kent State** shootings [or **May 4 massacre**]

239-14-102-14105

BONUS: What Russian composer helped inaugurate musical modernism with his ballets *Petrushka* and *The Rite of Spring*?

ANSWER: Igor **Stravinsky**

014-14-102-1410-11

6. **Travertine is one kind of this rock deposited by mineral springs, while tufa is another kind found in columns around Lake Mono. This rock consists primarily of aragonite (ah-RAH-guh-nite) and calcite. Karst topographies are most commonly formed from (*) dolomite or this rock, which reacts with acid to release carbon dioxide.** For 10 points, name this sedimentary rock consisting of calcium carbonate, often from marine organisms.

ANSWER: **limestone**

237-14-102-14106

BONUS: Gioachino (jee-uh-KEE-noh) Rossini composed what opera in which the title character Figaro helps Count Almaviva woo Rosina?

ANSWER: *The **Barber of Seville***

014-14-102-1410-11

7. **This party was blamed for a riot in Bath, Maine, and the related tarring and feathering of John Bapst. One of its Vice-Presidential nominees was the nephew of Andrew Jackson. This party contained many members from the Order of the (*) Star Spangled Banner.** This third party nominated Millard Fillmore for the Presidency in 1856, and its colloquial name refers to how its mostly anti-German and Irish members were supposed to deny being in this party. For 10 points, name this anti-Catholic, nativist political party in the 1850s.

ANSWER: **Know Nothing** Party [or Native **American** Party]

052-14-102-14107

BONUS: What city houses the Grand Ole Opry and Vanderbilt University?

ANSWER: **Nashville**, Tennessee

015-14-102-1410-11

8. **This poem's third section declares that this poem's dedicatee "will split the heavens of Long Island and resurrect your living human Jesus from the superhuman tomb." The second part of this poem describes a character who is "the crossbone soulless jailhouse and Congress of sorrows" named (*) Moloch.** This poem declares "Carl Solomon! I'm with you in Rockland" and starts by declaring that "I saw the best minds of my generation destroyed by madness." For 10 points, name this poem by Allen Ginsberg.

ANSWER: **Howl**

186-14-102-14108

BONUS: What eighteenth-century English author wrote the epistolary novels *Pamela* and *Clarissa*?

ANSWER: Samuel **Richardson**

014-14-102-1410-11



SET A:

1. BONUS: What daughter of Henry VIII was nicknamed "Gloriana" and became queen of England in 1558?

ANSWER: **Elizabeth I** [prompt on **Elizabeth**]

015-14-102-1410-12

2. BONUS: This is a 30-second calculation question. To win a board game, you have to roll a 20-sided die, with faces numbered 1 through 20, and get a 1. What is the probability that you roll a 1 and your opponent does not roll a 1, if the events are considered independent?

ANSWER: **19/400** [or **0.0475**; or **4.75%**]

190-14-102-1410-12

3. BONUS: What city burned down in a 1666 great fire that was recorded in Samuel Pepys' (PEEPS) diary?

ANSWER: **London**

015-14-102-1410-12

4. BONUS: What Cavalier poet wrote "To Lucasta, Going to the Wars" and "To Althea, from Prison"?

ANSWER: Richard **Lovelace**

014-14-102-1410-12

SET B:

1. BONUS: What small, Teflon-coated magnetic rods are placed in solutions in order to mix them by spinning?

ANSWER: magnetic **stir bars** [or **fleas**; or magnetic **stirrer**; prompt on magnetic **spinners**]

048-14-102-1410-12

2. BONUS: What anion, with formula H-minus, is commonly donated by reducing agents?

ANSWER: **hydride**

048-14-102-1410-12

3. BONUS: What man was exiled to the island of Saint Helena after fighting in the Hundred Days?

ANSWER: **Napoleon** Bonaparte [or **Napoleon I**; or Napoleon **Bonaparte**]

015-14-102-1410-12

4. BONUS: This is a 20-second calculation question. Two trees in a park are 25 feet and 40 feet tall, respectively. When the smaller tree casts a shadow ten feet long, how long of a shadow does the taller tree cast?

ANSWER: **16** feet

037-14-102-1410-12



9. In a play by this author, Eben Cabot fathers a child with his father's wife Abbie Putnam. In one of this man's plays, the former Pullman porter Brutus becomes the ruler of an island. This author of (*) *Desire Under the Elms* and *The Emperor Jones* wrote a play in which "Hickey" convinces the denizens of Harry Hope's saloon to give up their "pipe dreams." For 10 points, name this American playwright of *The Iceman Cometh* who created the Tyrone family in *Long Day's Journey Into Night*.

ANSWER: Eugene O'Neill

186-14-102-14109

BONUS: What largest U.S. bank, which is led by CEO Jamie Dimon, agreed in 2013 to a record thirteen billion dollar penalty to settle claims over its mortgage backed securities?

ANSWER: J.P. Morgan Chase

015-14-102-1410-11

10. Marian McPartland played this instrument on a radio show named for it until 2011. A performer of this instrument composed the soundtrack to the movie *Anatomy of a Murder*, and worked with the same composer who wrote his band's theme song, "Take the (*) A Train." Bill Evans played this instrument for the Miles Davis sextet. "Straight, No Chaser" is a song for this instrument written by Thelonious Monk. For 10 points, name this percussion instrument played by Duke Ellington.

ANSWER: piano

121-14-102-14110

BONUS: What was the nickname given to the stylish basketball played by the Lakers in the era of Kareem Abdul-Jabbar and Magic Johnson?

ANSWER: "Showtime"

080-14-102-1410-11

11. This man referred to South African bodyguards as the "Gestapo" when making a trip on behalf of Prime Minister Jan Smuts (YUN SMOOTS). Known as the "Industrial Prince" for his frequent tours of coal mines and factories, he was the father of a woman called "Lilibet." This king took the throne after his older brother, (*) Edward VIII, abdicated to marry Wallis Simpson. He underwent speech therapy with Dr. Lionel Logue to overcome his stammer. For 10 points, name this King of Britain during World War II, the father of Elizabeth II.

ANSWER: George VI [prompt on George]

052-14-102-14111

BONUS: What Greek letter denotes a change in a quantity as well as identifying functions named for Kronecker and Dirac?

ANSWER: delta

014-14-102-1410-11

12. **Sir Thomas Wyatt translated some of these poems written by Ronsard into English. Sir Philip Sydney's *Astrophel and Stella* is a sequence of this kind of poem. A collection of these kinds of poems "from the (*) Portugese"** was written by Elizabeth Barrett Browning, and an author who wrote one hundred fifty-four of these kinds of poems addressed some to the "Dark Lady." Shakespeare's poems of this kind include "Shall I Compare Thee to a Summer's Day?" For 10 points, name this type of poem that consists of fourteen lines.

ANSWER: sonnets

186-14-102-14112

BONUS: Janie Crawford lives in Eatonville before she meets Tea Cake, who gets rabies after the Okeechobee hurricane, in what novel by Zora Neale Hurston?

ANSWER: *Their Eyes Were Watching God*

023-14-102-1410-11

13. **Though he sided with the Greeks during the Trojan War, this god escorts Priam to Achilles's camp in the *Iliad*. Odysseus was descended from this god, as his grandfather was Autolycus (AH-tow-LYE-kuss). Two snakes intertwined around a staff, or a (*) caduceus, is a symbol of this deity. His mother was the eldest of the Pleiades and was named Maia (MY-uh). As a child, this god used the entrails of Apollo's cattle to fashion a lyre. For 10 points, name this god depicted with winged sandals, a trickster and messenger god.**

ANSWER: Hermes

190-14-102-14113

BONUS: This is a 20-second calculation question. Find the exact solution of the equation $7 + 5e^x = 10$. ["seven plus five times e to the x equals ten"]

ANSWER: $\ln 0.6$ [or $\ln 3/5$ or $\ln 3 - \ln 5$; or the natural log of 3/5; or the natural log of 0.6; or the natural logarithm of 3/5; or the natural logarithm of 0.6]

037-14-102-1410-11

14. **This man ordered the imprisonment of a man who criticized his plan for industrializing "poor and blank" lands after the Lushan conference. The Gang of Four jockeyed for power after his death. He asked citizens to produce (*) steel and not farm, resulting in a great famine. He advocated the Great Leap Forward and declared war on intellectuals in the Cultural Revolution. For 10 points, name this author of the *Little Red Book* who was the first chairman of Communist China.**

ANSWER: Mao Zedong

020-14-102-14114

BONUS: What rule states that the limit of the ratio of two functions is equal to the ratio of the derivatives of those functions?

ANSWER: L'Hopital's (LOW-pea-tahl's) rule

014-14-102-1410-11

15. **Police found this man thanks to a tip from former Miss Iceland Anna Bjornsdottir (BYORNZ-daughter). His brother, Billy, was a politician and college president who was forced to resign in 2003 over contact with this man. This fixture on (*) Most Wanted lists was arrested in 2011 at age eighty-one while living in Santa Monica. For 10 points, name this captured fugitive who was sentenced to two consecutive life terms for crimes committed while leading Boston's Winter Hill Gang.**

ANSWER: James Joseph "Whitey" Bulger Jr.

052-14-102-14115

BONUS: What NBA team is currently coached by Randy Wittman and is led by John Wall and Bradley Beal?

ANSWER: Washington **Wizards** [or **Washington** Wizards]

015-14-102-1410-11

16. **This man was friends with his rival Luz Long, whom this man defeated to win the long-jump. This man set or tied four world records in less than an hour while running for Ohio State at the Big Ten track and field championships, and some of his feats were shown in (*) Leni Riefenstahl's documentary *Olympia*.** For 10 points, name this African-American track and field athlete whose four gold medals at the 1936 Berlin Olympics thwarted Hitler's attempt to demonstrate Aryan superiority.

ANSWER: Jesse **Owens**

030-14-102-14116

BONUS: What Republican Party faction, which was represented by Chester A. Arthur on the Garfield ticket, believed in the spoils system and was opposed to the Half-Breeds?

ANSWER: **Stalwarts**

080-14-102-1410-11



17. Spacecraft specifically investigating these phenomena include **Hinode (HE-node-ay)**, **Yohkoh**, and **RHESSI (RESS-ee)**. **Nitrates and beryllium-10 persist in Greenland from an 1859 example of these phenomena called the Carrington event. They are classified as A, B, C, M, X, or Z depending on the peak flux. These events are similar to (*) coronal mass ejections, and they can trigger geomagnetic storms with the potential to knock out power. For 10 points, name these events in which a large amount of energy enters the Earth's ionosphere, after being discharged from the Sun.**

ANSWER: **solar flares** [or **coronal mass ejections** until it is read; or **CME** until "coronal mass ejections" is read; or **geomagnetic storms** until it is read; prompt on **flares**]

020-14-102-14117

BONUS: In Norse mythology, what eight-legged horse is ridden by Odin?

ANSWER: **Sleipnir**

014-14-102-1410-11