hsapq

1. This character claims that he was once an Indian nobleman, and he supposedly has an art collection that rivals the Louvre. This character ordered the destruction of the *USS Abraham Lincoln*, and he appeared in *The Mysterious Island*. He was saved from a creature by Ned Land in the forest of Crespo. He also hosted the shipwreck victims Conseil and Professor Arronax. For 15 points, name this captain of the *Nautilus* in Jules Verne's novel *Twenty Thousand Leagues Under the Sea*.
ANSWER: Captain **Nemo**

030-13-104-16101

BONUS: This is a 20-second calculation question. Convert the polar coordinates "r = 4, theta = 3 pi over 4" to rectangular coordinates.
ANSWER: (**-2** times the square **root** of **2**, **2** times the square **root** of **2**) [or x = **-2 root 2**, y = **2 root 2**]

190-13-104-1610-11

2. A law of this type which also established an income tax led to the *Pollock* case. William Howard Taft declared that the best one of these things was a controversial bill masterminded by Nelson Aldrich. During the 1920s, the Fordney-McCumber one was passed. One of these pieces of legislation named for Senators Hawley and Smoot provoked a trade war that intensified the Great Depression. For 15 points, name these protectionist laws that impose taxes on imports.
ANSWER: **tariff**s

080-13-104-16102

BONUS: Which King of England was killed at the Battle of Bosworth Field, ending the War of the Roses?
ANSWER: **Richard III** [prompt on **Richard**]

186-13-104-1610-11

3. The title of this novel references an unfinished novel by the fictional author "F. Alexander." People in this novel speak a weird slang called Nadsat. The main character undergoes the Ludovico Technique and is a youth who loves Beethoven and commands a gang of "droogs," but is arrested and forced to watch graphically violent films in aversion therapy. For 15 points, name this Anthony Burgess novel about the criminal Alex undergoing a procedure to forcibly "rehabilitate" him.
ANSWER: *A **Clockwork Orange***

052-13-104-16103

BONUS: This is a 30-second calculation question. A bag has ten ping pong balls in it, numbered one through ten inclusive. Three people each draw a ball from the bag without replacement. What is the probability that each of them drew an odd number?
ANSWER: **1/12**

037-13-104-1610-11

4. In one book, this writer described his observations of red and black ants fighting, and he began an essay by endorsing the motto, "That government is best which governs least." One of his essays was written after he was arrested for refusing to pay a poll tax supporting the Mexican-American War, and his most famous book describes his time living in a cabin by the title pond. For 15 points, name this transcendentalist who wrote "Civil Disobedience" and *Walden.*
ANSWER: Henry David **Thoreau**

014-13-104-16104

BONUS: This is a 30-second calculation question. A dartboard has radius 8 inches, and the inner bullseye has radius of one-half an inch. If a dart strikes the dartboard, what is the probability that it hits the bullseye?
ANSWER: **1/256**

5. The second law of thermodynamics is one of the few laws violated when this quantity moves in the opposite direction. The Pound-Rebka experiment provided evidence of gravity causing it to dilate. Minkowski space is a coordinate system where this quantity is added as a fourth dimension to the usual three. The derivative of momentum with respect to this quantity is force. For 15 points, name this quantity measured in hours and seconds.
ANSWER: **time**

BONUS: Which American actor has starred as Sherlock Holmes and played Tony Stark in three *Iron Man* films?
ANSWER: Robert John **Downey** Jr.

6. The first stages of this conflict ended with the Battle of Lade (LA-day), which quelled the Ionian Revolt. This war ended when Pausanias won at Plataea. This conflict was chronicled by Herodotus, whose *Histories* are sometimes named for it. Another battle in this war saw three hundred Spartans hold off an army for three days. For 15 points, name this early fifth century BCE conflict, in which the armies of Darius and Xerxes (ZERK-zeez) attempted to conquer cities such as Athens.
ANSWER: Greco-**Persian War**s [or equivalent answers such as **Persian invasions of Greece**; or the **Ionian Revolt** before it is read]

BONUS: What English verb is equivalent to the French "tomber" and the Italian "cadere" (cah-DEE-ree)?
ANSWER: to **fall**

7. In one appearance, it is revealed that this character's briefcase is filled with donuts and ice cream. In another episode, this character feeds his friend advice on a walkie-talkie to help him pass his boat-driving test, though Mrs. Puff still fails him. This character's dwelling under a rock is separated from his friend's pineapple by their neighbor Squidward. For 15 points, identify this starfish, the best friend of Spongebob Squarepants.
ANSWER: **Patrick** Star

BONUS: Oedipus unwittingly killed what father of his at a crossroads?
ANSWER: **Laius**

8. The first large use of shell guns in a naval fight happened during this war's Battle of Sinope. Francois Canrobert and Lord Raglan took part in this war's year-long siege of Sevastopol. Nicholas I died while his country fought in this war, which was ended by the Treaty of Paris. The Battle of Balaclava during this war included the Charge of the Light Brigade. For 15 points, name this mid-nineteenth century war lost by Russia to a European coalition and fought on the namesake peninsula.
ANSWER: **Crimean** War

BONUS: What twentieth-century Russian composer wrote a famous second piano concerto in in C minor as well as *Rhapsody on a Theme of Paganini*?
ANSWER: Sergei **Rachmaninoff**

9. This president sent in federal troops to deal with the Great Railway Strike. For supporting the temperance movement, his wife was nicknamed "Lemonade Lucy." Congress overrode this man's veto of the silver-purchasing Bland-Allison Act. After an Electoral Commission chose this man over his popular Democratic opponent Samuel Tilden, he was dubbed "his Fraudulency." For 15 points, name this Republican who became president after the controversial Election of 1876.
ANSWER: Rutherford B. **Hayes**

BONUS: This is a 20-second calculation question. The ratio of a circle's area to its circumference is 16 inches. What is the diameter of the circle?
ANSWER: **64** inches

10. A character in this novel first finds out that his name isn't Maury soon after his grandmother Damuddy's funeral, when he first realizes that his sister "smells like trees". That character later gets castrated. Another protagonist of this novel jumps to his death in the Charles River, when he finds out that his sister Caddy became pregnant with Dalton Ames. This novel is titled for a passage from *Macbeth* about a "tale told by an idiot." For 15 points, name this novel about Quentin, Benjy, and the rest of the Compson family written by William Faulkner.
ANSWER: *The **Sound and the Fury***

BONUS: What river of northern China, whose name derives from its loess (LESS) soil content, is called "China's sorrow" for its frequent flooding?
ANSWER: **Yellow** River [or **Huang He**]

11. This character loses a hundred sheep loaded with riches, but then miraculously recovers one from a sinking ship. This man is framed with burglary by the governor of Buenos Aires, causing him to flee the city with his servant Cacambo. He is forced to buy his freedom with diamonds at Paris. This character and Pangloss are punished for "bringing" an earthquake to Lisbon, and he was previously expelled from Baron Thunder-ten-Tronckh's household for kissing Cunegonde. For 15 points, name this character who titles a novel by Voltaire.
ANSWER: **Candide**

BONUS: What hypothetical thermodynamic process is is the most efficient cycle for a heat engine?
ANSWER: **Carnot** cycle [accept **Carnot** heat engine]

12. This property was demonstrated in an experiment involving a beam of silver atoms traveling through an inhomogeneous magnetic field; that experiment was conducted by Stern and Gerlach. It takes integer values for bosons and half-integer values for fermions; for electrons, it takes values of plus and minus one-half. Two electrons in the same orbital cannot have the same value for this property because of the Pauli exclusion principle. For 15 points, identify this fourth quantum number which is either "up" or "down" for electrons.
ANSWER: **spin**

BONUS: What Swiss psychiatrist speculated about the existence of universal archetypes in what he called the "collective unconscious?"
ANSWER: Carl **Jung**

13. This man served as music director of the St. Thomas Choir in Leipzig for twenty-seven years until his death. The piece "Jesu, Joy of Man's Desiring" was excerpted from one of the over 200 cantatas that he composed. He wrote a book of preludes and fugues in all 24 major and minor keys, and composed a set of six Baroque concertos as a job application for a German margrave. For 15 points, name this German composer of *The Well-Tempered Clavier* and the *Brandenburg Concertos,* the first of the three "B"s.
ANSWER: **J. S. Bach** [or **Johann Sebastian Bach**; prompt on **Bach**; prompt on **J. Bach**; prompt on **Johann Bach**]

BONUS: This is a calculation question. What is the range of the function y equals negative x squared plus 2 x minus 5?
ANSWER: y is **less than or equal to -4** [do not accept "less than -4"]

14. Languages in this paradigm often contain the special variable "this" or "self" that implement open recursion. Data of one type can be used as data of another type by the use of subtype polymorphism in this paradigm. By concealing the way data is implemented in this paradigm, one can organize data with encapsulation. The procedures associated with the namesakes of this paradigm are called methods. For 15 points, name this programming paradigm that includes languages like Java.
ANSWER: **object-oriented** programming [or **OOP**]

BONUS: What phenomenon can be explained by the elastic-rebound theory and was quantified by the Richter scale?
ANSWER: **earthquake**s

15. A series of these objects used to demonstrate conservation of energy and momentum when colliding with one another is named Newton's cradle. The small angle approximation allows for these systems to approximate simple harmonic motion at small amplitudes. The period of these objects is two pi times the square root of *L* over *g*. The double type exhibits chaotic motion, and one of these objects was used by Foucault to demonstrate the rotation of the earth. For 15 points, identify these systems consisting of a mass on a string.
ANSWER: **pendulum** [or **pendula**]

BONUS: Name the region awarded to Rollo by Charles the Simple that was later led by a conqueror whose forces won at Hastings and killed Harold Godwinson.
ANSWER: **Normandy** [or **Normandie**]

16. This man was conceived when Pittheus got his father drunk so that he would sleep with Pittheus's daughter. This hero killed Sinis by catapulting him from a bent pine tree. He was required to capture the Marathonian Bull, and his father threw himself into the sea when he forgot to exchange his black sails for white. This son of Aegeus abandoned Ariadne on Naxos after she gave him a spool of thread used in his most famous task. For 15 points, name this hero who navigated the labyrinth and killed the Minotaur.
ANSWER: **Theseus**

BONUS: This is a 30-second calculation question. How many distinct real roots does the polynomial "x cubed plus 3 x squared plus 9 x plus 7" have?
ANSWER: **1**

17. This politician introduced the second reading of the Coal Mines Regulation Act, which limited miners to eight-hour workdays. This prime minister appointed Ernest Bevin as minister of labor and gave a speech that said he had "nothing to offer but blood, toil, tears, and sweat." This man's predecessor reached the Munich Agreement as part of a policy of appeasement. For 15 points, name this prime minister who succeeded Neville Chamberlain to lead Britain during World War II.
ANSWER: Winston Leonard Spencer **Churchill**

BONUS: What poetic foot consists of a stressed syllable followed by an unstressed one?
ANSWER: **trochee**

18. During this war, Captain George Downie was slain in a failed naval maneuver to surround Plattsburgh. William Hull led the first of three invasions of Canada during this war. A last-minute victory at the Battle of New Orleans cheered a combatant in this war, which ended with the Treaty of Ghent. After the Battle of Bladensburg during this war, the British burned Washington. For 15 points, name this war between the United States and England that took place in the early 19th century.
ANSWER: the War of **1812**

BONUS: This is a 20-second calculation question. A square peg fits in a round hole of radius 4 units. What is the maximum area of the base of the peg?
ANSWER: **32** square units

19. Albert Schweitzer argued that this event was misperceived by its witnesses. According to a detail found only in the Gospel of Matthew, Peter's life had to be saved after he tried duplicating this event. This event took place after the feeding of the five thousand, on a night when the performer was alone on the Sea of Galilee. For 15 points, name this physics-defying miracle performed by Jesus.
ANSWER: Jesus **walking on water** [or equivalents]

BONUS: Name the concept referring to the usage of multiple CPUs or cores to carry out a computational thread or program.
ANSWER: **parallel** processing [accept word forms]

20. The standard used in this technique is called a ladder. SDS-PAGE is used on proteins before they undergo this process to give them a negative charge. This technique is the first step of doing a Southern blot. Ethidium bromide, an intercalating agent, is added in this technique. The distance travelled by each fragment in this technique is inversely related to the length, in base pairs, because the long fragments get trapped in the agarose. For 15 points, name this technique in which an electric potential forces DNA through a gel.
ANSWER: gel **electrophoresis**

BONUS: What English chemist was the first to isolate oxygen, which he termed "dephlogisticated air"?
ANSWER: Joseph **Priestley**

21. A ship found in this body of water in 2009 is thought to be the USS *Caledonia*. One sixth of this lake was affected by a record-breaking 2011 algae bloom. This lake's South Bass Island contains the village of Put-In-Bay. Cities on this lake's shores include Sandusky and Toledo. The Detroit and Cuyahoga rivers flow into this lake. The cities of Buffalo and Cleveland lie on this lake. For 15 points, name this fourth-largest of the Great Lakes, south of Lake Huron and west of Lake Ontario.
ANSWER: Lake **Erie**

BONUS: What English philosopher described the *tabula rasa* in his *An Essay Concerning Human Understanding*?
ANSWER: John **Locke**

22. Light carries two distinct forms of this property, since it does not travel in an exactly straight line, rotating around that line instead. Precession occurs when this quantity shifts, but its magnitude does not change. This quantity is the same for all points in an orbit, a result that forms the basis of Kepler's Second Law of Motion. For 15 points, name this quantity for a rotating body, the product of rotational inertia and velocity.
ANSWER: **angular momentum** [prompt on **momentum**; do not accept **linear momentum**]

BONUS: What leader of the Christian Democratic Union became the first Chancellor of West Germany?
ANSWER: Konrad **Adenauer**

23. This author begins a play with Septimus Hodge challenging a teenager to prove Fermat's Last Theorem. That play is set at the country house Sidley Park. This man's best known play opens with the title characters betting on coin flips, with heads winning ninety-two times in a row. That play features two minor characters from *Hamlet* as the title characters. For 15 points, name this British playwright, the author of *Arcadia* and Rosencrantz and Guildenstern Are Dead.
ANSWER: Tom **Stoppard** [or Tomas **Straussler**]

BONUS: This is a 20-second calculation question. What is the cosecant of the third-quadrant angle whose tangent is 4/3?
ANSWER: **-5/4**

24. A character created by this author shouts, "You're one of my own children!" to the man who shoots her dead. In one of this author's stories, the mentally retarded girl Lucynell gets left behind by her fiancé Tom Shiftlet at a diner. Julian is disgusted by his mother's gift of a quarter to an African-American child in the title story of this author's *Everything That Rises Must Converge*. For 15 points, name this Southern Gothic writer, who described the Misfit's murder of the Grandmother in "A Good Man is Hard to Find."
ANSWER: Flannery **O'Connor**

BONUS: What glacially formed accumulation of debris has among others, ground, lateral, and terminal types?
ANSWER: **moraine**s

25. This novel's protagonist changes his style of dress after a major in his home town forces him to march for forgetting to salute. Characters in this novel include Detering, Leer, and Tjaden, who becomes angry at the jingoistic schoolteacher Kantorek after the death of their classmate Joseph Behm. It shifts to the third person for its final chapter, which describes the death of Paul Baumer. For 15 points, name this novel about German soldiers fighting in World War I by Erich Maria Remarque.
ANSWER: _**All Quiet on the Western Front**_

26. This country's toilet paper shortage led its government to take control of a toilet paper factory in September 2013. Until 2007, this country was the only one in the Western Hemisphere to be a member of OPEC. Nicolás Maduro became vice-president here in 2012, and succeeded to the presidency after the death of this country's leader in March 2013. For 15 points, name this South American country that until Maduro had as its president Hugo Chavez.
ANSWER: **Venezuela**

27. This character is killed shortly after asking "Which is better-to have rules and agree, or to hunt and kill?" At the end of the novel in which he appears, Ralph cries for this boy. When this character dies, a conch is broken into pieces. This character's glasses are used to start a fire and he is crushed by a boulder by children who have become savage while on an island. For 15 points, name this overweight child and character in William Golding's *Lord of the Flies*.
ANSWER: **Piggy**

052-13-104-16127

00--20-1610-11

28. This country was first run by an idealist known as "Dr. Francia." A dictator in this country who was of German descent welcomed such fugitives as Nazi experimenter Dr. Josef Mengele. It was run for much of the 20th century by dictator Alfredo Stroessner. Under Francisco Solano Lopez, this country was crushed in a war pitting it against Argentina, Brazil, and Uruguay. For 15 points, name this landlocked South American country that lost the War of the Triple Alliance.
ANSWER: **Paraguay**

052-13-104-16128