



1. The reaction of these things to stressful forces is called tenacity. Adding a drop of hydrochloric acid and seeing whether these things fizz can be used to test whether they contain carbonate. The color these things display in a powdered form is called streak. Their crystal lattice determines their properties of parting, fracture, and cleavage. The vast majority of Earth's crust is made up of the silicate type of these things. For 10 points, name these constituents of rocks.

ANSWER: minerals [prompt on crystals until "crystal lattice" is read]

066-13-96-05101

2. A poet from this country wrote a group of poems called *Cradlesongs* in her book *Tenderness: Songs for Children*. Another writer from this country wrote of Clara, who vows to never again speak to her husband Esteban Trueba (troo-EY-buh) after being slapped by him. The authors of *Sonnets of Death* and *House of the Spirits* were from this country. For 10 points, name this South American nation, the home country of the writers Gabriela Mistral, Isabel Allende (eye-EN-day), and Pablo Neruda.

ANSWER: Chile

030-13-96-05102

3. During the race that determined the twelve Chinese zodiacs, this animal was saved by a log dropped by the dragon and arrived in fourth place. According to Japanese and Korean folklore, this animal can be found on the moon pounding rice cakes with its pestle. The German "wolpertinger" (VOLE-per-ting-gur) is the ancestor of the American belief in the jackalope, which is often described as one of these animals with deer antlers. For 10 points, name these animals that distribute colored eggs during Easter.

ANSWER: rabbit [or hare]

227-13-96-05103

4. This story's narrator measures out his room by attaching a torn piece of clothing to the wall and counting his paces along the perimeter. This story ends with the arrival of the French army under Lasalle. It occurs in a room whose walls heat up and contract. The Spanish Inquisition imprisons the protagonist of this story, who saves himself by attracting rats to chew through his bonds. For 10 points, name this Edgar Allan Poe story about a prisoner nearly executed by a periodically-swinging scythe.

ANSWER: "The Pit and the Pendulum"

080-13-96-05104

5. This man presently collaborates with Nigel Shadbolt (SHAD-bot-ul) on a British government project to open government-acquired data to public perusal. Both of this man's parents helped operate the Ferranti Mark 1, the first privately built computer. This scientist created the ENQUIRE system to demonstrate possible uses for hypertext, and on his later stint with CERN, he made the first client-server connection over HTTP in November 1989. For 10 points, name this British computer scientist who invented the World Wide Web.

ANSWER: Tim Berners-Lee

019-13-96-05105

6. In Washington state, John Braun introduced a measure to stop individual cities from changing this value after residents of SeaTac voted in 2013 to raise it. In a December 2013, speech, Barack Obama claimed this value in real terms was "below where it was when Harry Truman was in office." Fast Food Forward aims to increase this value for fast food workers. Thirteen states increased this value at the start of 2014. For 10 points, name this value that, at the federal level, is currently set at seven dollars and twenty-five cents an hour.

ANSWER: minimum wage

023-13-96-05106

7. A painting depicting this deity sleeping is sometimes named after its city of residence, Dresden, and was finished by Titian after the death of its original artist, Giorgione (jor-JOH-nay). In another painting, this deity stands in an orange grove to the right of the three Graces, who are dancing. A woman reaches out with a red cloak to clothe this goddess while Zephyr and Aura look on in a famous depiction of her. For 10 points, what goddess stands on top of a seashell in a Botticelli painting describing her birth?

ANSWER: Venus [or Aphrodite]

140-13-96-05107

8. A participant in this event described gauchos using weapons called *bolas* to kill an ostrich-like animal known as the rhea. Another of its participants supported Charles Lyell's thesis by observing a white layer of seashells between black volcanic rock layers in the Cape Verde Islands. Observations of slavery and so-called "savage races" during this event led one man to write *The Descent of Man*. When this expedition stopped at the Galapagos Islands, that man described his finches. For 10 points, name this expedition aboard a certain ship that led Darwin to formulate his theories.

ANSWER: second voyage of the *HMS Beagle* [or obvious equivalents, such as the second expedition of the *HMS Beagle*; prompt on Darwin's voyages or obvious equivalents]

020-13-96-05108

9. This former NBA player is the most recent player to win all three of the regular season, All-Star, and Finals MVP awards in a season. After playing a Christmas game in 2006, this player for the Heat called his former coach, Phil Jackson, a "Benedict Arnold." A strategy that involved forcing this player to shoot free throws involved opposing players "hacking" this man. This player was drafted first overall out of LSU by the Orlando Magic in the 1992 NBA draft. For 10 points, name this center who won three consecutive championships with the Lakers and had a feud with Kobe Bryant.

ANSWER: Shaquille Rashaun O'Neal [or Shaq]

023-13-96-05109

10. This President appointed the Seneca Indian Ely Parker as the Commissioner of Indian Affairs. This man's Secretary of State, Hamilton Fish, settled the *Alabama* claims affair in the Treaty of Washington. During this man's Presidency, Congress passed the Force Acts to combat the Ku Klux Klan. His Vice President, Schuyler Colfax, was implicated in the Credit Mobilier (MOH-beel-yay) scandal. While commanding the Union armies, this man received Robert E. Lee's unconditional surrender at Appomattox. For 10 points, name this eighteenth President, who succeeded Andrew Johnson.

ANSWER: Ulysses Simpson Grant [or Hiram Ulysses Grant]

186-13-96-05110

11. Net electric flux equals this quantity divided by the permittivity according to Gauss's law. The elementary value for this quantity was determined by balancing the gravitational and electric forces on an oil drop in an experiment conducted by Millikan. Current is the rate of change of this quantity with respect to time. The force on a particle is equal to this quantity times the electric field. For 10 points, identify this quantity measured in Coulombs, which is negative for an electron.

ANSWER: electric **charge**

226-13-96-05111

12. Emile Durkheim's *Elementary Forms of the Religious Life* used a test of social role to distinguish this phenomenon from religion. It was the last of three phenomena studied "among the Azande" (uh-ZAHN-day) by Edward Evans-Pritchard, who outlined a type of "thinking" known by this term, and it was grouped with "science and religion" in a Bronislaw Malinowski paper. According to James Frazer, this phenomenon always precedes religious belief. For 10 points, identify this phenomenon of manipulating the natural world with incantations and rituals.

ANSWER: **magic** [or word forms]

019-13-96-05112

13. This author wrote about a lawyer who wagers that he can spend fifteen years alone in a garden house in his story "The Bet." This author created Ivan Voitsky, an estate manager who shoots at the gout-ridden professor Alexander Serebryakov (seh-ruh-BRAI-uh-koff). This author is known for his plays about wealthy landowners's unfulfilled lives, including one in which Madame Ranevskaya (rah-neff-SKIE-uh) sells her estate to Lopakhin. For 10 points, name this Russian playwright of *Uncle Vanya* and *The Cherry Orchard*.

ANSWER: Anton **Chekhov**

080-13-96-05113

14. The speaker of one of this man's poems concludes, "He must be wicked to deserve such pain," upon seeing a "stiff blind horse." That poem of his ends with the title character blowing his slug-horn before a foreboding structure. He also wrote a poem spoken by the Duke of Ferrara, who shows off the portrait of the wife he probably had murdered. For 10 points, name this Victorian poet who wrote the dramatic monologues "Childe Roland to the Dark Tower Came" and "My Last Duchess."

ANSWER: Robert **Browning**

014-13-96-05114

15. Francis Dana declined to participate in this event, leading to the appointment of the future fifth Vice-President. The main participants in this event returned home, eventually leading to William Vans Murray taking over the proceedings. During it, an American called out "No, no, not a sixpence!" This event featured Charles C. Pinckney, John Marshall, and Elbridge Gerry taking offense to agents of Foreign Minister Talleyrand. For 10 points, name this 1797 scandal in which three French diplomats demanded bribes from an American delegation.

ANSWER: **XYZ** Affair

052-13-96-05115



1A. What quantity is the rotational analogue of force?

ANSWER: **torque**

1B. What last-in-first-out data structure uses “push” and “pop” operations?

ANSWER: **stack**

2A. What prophet is traditionally credited with writing the Book of Lamentations?

ANSWER: **Jeremiah**

2B. What game show currently hosted by Drew Carey includes mini-games such as Plinko and Cliff Hangers?

ANSWER: *The **Price is Right***

3A. This is a 20-second calculation question. What is y in the solution to the system of equations: “ $y = x + 3$ ”, and “ $x + 2y = 9$ ”?

ANSWER: **4**

3B. This is a 20-second calculation question. How many angles between 0 and 10 pi radians have a reference angle of pi over 4?

ANSWER: **20**

4A. What law for triangles states that the ratio of side length to a certain function of the opposite angle is equal for all sides?

ANSWER: law of **sines**

4B. What South Korean company has found success with its Galaxy line of phones but received mixed reviews for its Galaxy Gear watch?

ANSWER: **Samsung**

5A. What thinker proposed the "general will" as the guiding force of societies in *The Social Contract*?

ANSWER: Jean-Jacques **Rousseau**

5B. What is the name for the voice register above bass but below tenor?

ANSWER: **baritone**

6A. What French novelist included *Pere Goriot* (PAIR GORE-ee-oh) in his series *The Human Comedy*?

ANSWER: Honore de **Balzac**

6B. What element with atomic number 5 is used to absorb neutrons in nuclear reactors?

ANSWER: **boron**

7A. What bone of the human thigh is the longest in the body?

ANSWER: **femur**

7B. What painting by Jacques Louis David shows a French revolutionary in his bathtub?

ANSWER: *The **Death of Marat***

8A. In what type of chemical bond do atoms share electrons?

ANSWER: **covalent**

8B. What state is the site of Omaha and is known as the Cornhusker state?

ANSWER: **Nebraska**

9A. This is a 30-second calculation question. A circle has radius 10 inches. A sector of the circle has area 25π square inches. In degrees, what is the measure of the central angle subtended by this sector?

ANSWER: 90 degrees

9B. This is a 30-second calculation question. If you flip a fair coin four times, what is the probability that exactly three of the tosses turn up heads?

ANSWER: 1/4 [or 4/16; or 25%; or 0.25]

10A. What scale of hurricane strength classifies hurricanes into categories one through five based on wind speed?

ANSWER: Saffir-Simpson scale

10B. What radical leader of the Committee of Public Safety during the French Revolution was killed during the Thermidorian Reaction?

ANSWER: Maximilien de Robespierre



1. This composer's Symphony Number 4 in D minor opens with a fast movement marked *Lebhaft* (LAYB-hoft). This composer was confined to an asylum after throwing himself into the Rhine in a failed suicide attempt brought on by syphilis. This composer included "Traumerei" (TROW-mer-ai) in a set of piano pieces called "Scenes from Childhood." This composer's first symphony is nicknamed the "Rhenish." For 10 points, name this German composer who wrote a number of famous pieces for his wife, Clara Wieck.

ANSWER: Robert Schumann

080-13-96-05117

2. A large population of albino people lives on this lake's largest island, Ukerewe (OO-kay-RAY-way) Island. The Winam Gulf of this lake is the site of Homa Bay and the port city of Kisumu (kiss-OO-moo). James Ogwang brought South American weevils to combat this lake's problem with the invasive water hyacinth. This lake receives the Kagera (kah-GAIR-uh) River to its west, and is the source of the White Nile. For 10 points, name this East African lake that is the second largest freshwater lake in the world and the largest overall in Africa.

ANSWER: Lake Victoria

023-13-96-05118

3. Although not carbon, the ring in the structure of lipoic acid contains two atoms of this element bonded to each other. Aconitase is an example of an enzyme in which atoms of this element form complexes with iron. The tertiary structure of proteins is helped in part by bonds between two atoms of this element, which is found in the amino acids methionine and cysteine. Anaerobic respiration in some bacteria releases a rotten-smelling molecule comprised of an atom of this element bonded to two hydrogens. For 10 points, name this element with atomic symbol S.

ANSWER: sulfur [or S until it is read]

140-13-96-05119

4. A character in this novel has a dream in which he saws a child's wrist against the glass of a window to prevent her from entering his room. Another character in this novel dies in childbirth after a forbidden visit from her tortured soul-mate. This novel is narrated to Mr. Lockwood, the new tenant of Thrushcross Grange. The title residence of this novel is the childhood home of Catherine Earnshaw and the adopted orphan Heathcliff. For 10 points, name this novel by Emily Bronte.

ANSWER: Wuthering Heights

014-13-96-05120

5. Napoleon Hill wrote the self-help book *The Laws of Success* on the advice of this man. His own writings include *The Gospel of Wealth*. His partner Henry Clay Frick hired Pinkerton troops to attack striking workers at one of his plants in Homestead, Pennsylvania. The world's first billion-dollar corporation was formed when he sold his company to J.P. Morgan to create U.S. Steel. For 10 points, name this Scottish-American steel manufacturer.

ANSWER: Andrew Carnegie

121-13-96-05121

6. This poet drew on his experience as a nurse in wartime to write "The Wound-Dresser." This poet described mourning after "the great star early droop'd into the endless night" in a poem containing a "carol of death" from a gray bird. This poet wrote, "The ship has weather'd every rack, the prize we sought is won" in a poem that, like "When Lilacs Last in the Dooryard Bloom'd," treats the death of Abraham Lincoln. For 10 points, name this poet of "O Captain, My Captain!" and the collection *Leaves of Grass*.
ANSWER: Walt **Whitman**

080-13-96-05122

7. This technique comes in "blue native" and "clear native" forms, depending on the use of a triphenylmethane dye. Discontinuous buffers like tris-glycine are used to improve resolution in a form of this technique. This technique is one of the principal steps of the Southern blot. A staining agent used in it fluoresces orange under UV and contains bromine. Its pulsed-field form is used to separate extremely large molecules by size and charge. For 10 points, identify this technique in which an electric field is run through a polyacrylamide or agarose matrix.

ANSWER: **gel electrophoresis** [prompt on **electrophoresis**]

234-13-96-05123

8. A conflict among these people started when four girls fought over who was the true wife of William Brind. In less than a week, James Busby and William Hobson wrote a treaty signed by these people agreeing to British sovereignty. These people were decimated when an influx of firearms sparked the Musket Wars. In another conflict among these people, Pikauterangi (PEEK-ow-teh-RON-gee) was defeated at the battle of Hingakaka (HING-guh-KAH-kah). For 10 points, name these signers of the Treaty of Waitangi (why-TONG-ghee), the indigenous population of New Zealand.

ANSWER: **Maori**

239-13-96-05124

9. A German expression for an indecisive person refers to being both in and out of these objects, and a romantic arrangement named for this item is a German expression for an older couple that lives together without marrying. Spanish vendors legendarily misplaced an accent on the word for "Pope," printing thousands of T-shirts boasting of seeing what English speakers call this item. French refers to these items as literally an "Earth apple," and the German word for one is "Kartoffel" (KAR-tuh-fel). For 10 points, what is this item that is a "pomme de terre" in French and "papa" in Spanish?

ANSWER: a **potato** [or **potatoes**, etc.; or die **Kartoffel** until "Spanish" is read; or die **Kartoffeln** until "Spanish" is read]

019-13-96-05125

10. Ernst von Freyberg is the president of a financial services institute in this country, the IOR. In 2014, a former accountant for that organization here was charged with laundering money for his home in Salerno. Paolo Gabriele stole documents from his employer here which he leaked to journalist Gianlugi Nuzzi. This country's leader decided to live in Saint Martha's House rather than the traditional apartments after replacing the first leader to resign in over seven hundred years. For 10 points, name this city-state led by Pope Francis.

ANSWER: **Vatican** City

121-13-96-05126

11. A constant represented by this letter is defined as one over the square root of quantity one minus the ratio of v squared to c squared and is named for Lorenz. Iron in the Pound-Rebka experiment emitted radiation named for this letter. It isn't pi, but a function named for this letter is an extension of the factorial for positive non-integers. A supernova may cause an extremely high "burst" of radiation named for this letter, which has the shortest wavelength of all forms of radiation. For 10 points, name this Greek letter that represents the highest level of electromagnetic radiation.

ANSWER: **gamma**

239-13-96-05127

12. Forces led by this man's nephew Otto IV of Germany lost Aquitaine at the Battle of Bouvines (boo-VEEN). Maud of Braose (BROWZ) accused this king of murdering his nephew Arthur of Brittany and dumping his body into the Seine. Innocent III excommunicated him for opposing the appointment of Stephen Langton as Archbishop of Canterbury. He was forced to sign a document by rebellious barons at Runnymede. For 10 points, name this King of England and brother of Richard I who signed the Magna Carta.

ANSWER: King **John** [or **John** Lackland]

186-13-96-05128

13. This character type is exemplified by the picaresque storyteller Barry Lyndon in a novel by William Thackeray. Controversially, Dr. James Sheppard, the killer in Agatha Christie's *The Murder of Roger Ackroyd*, turns out to be one of these character types, which critics claimed was audience betrayal. Due to his immaturity, Huck Finn is one of these character types. For 10 points, name this type of literary character, a person who cannot be trusted while telling the story to the audience.

ANSWER: **unreliable narrator** [or **lying narrator**; or obvious equivalents]

052-13-96-05129

14. The McLaren Vale and Barossa Valley of this country are known for their shiraz wines. This country was the site of mines in the Golden Mile of its western city of Kalgoorlie. Polish explorer Pawel Strzelecki (struh-LECK-ee) was the first man to climb this country's highest peak, Mount Kosciuszko. This country's city Alice Springs is the nearest to the rock formation known as either Uluru or Ayers Rock. For 10 points, name this country that is the only one to also be a continent and whose western half is mostly made up of the Outback, which is the home of many kangaroos.

ANSWER: Commonwealth of **Australia**

023-13-96-05130

15. In this novel, McCann tries to persuade the protagonist to sign a political petition. The third chapter of this novel features a lengthy fire and brimstone sermon delivered by Father Arnall. Earlier, the protagonist endures traumatic experiences at Clongowes (CLAHN-gows) boarding school. At the end of this novel, the protagonist decides to exile himself from his native Ireland. For 10 points, name this partly autobiographical bildungsroman about Stephen Dedalus written by James Joyce.

ANSWER: A **Portrait of the Artist as a Young Man**

014-13-96-05131



1. In a "differential" setup named for these objects, two of them exert opposite and unequal torques on a third. The acceleration in another system with one of these objects at its apex is proportional to the difference of two masses divided by their sum. Their mechanical advantage increases as more of them are used at once. An idealized Atwood machine contains two weights, a string, and a massless one of these objects, which are used in a block and tackle to lift objects. For 10 points, name this simple machine that consists of a wheel with a rope over it.

ANSWER: pulley

132-13-96-05132

2. An isotope of this element is created when neutrons escaping from a fusion reaction hit lithium atoms. Lindlar's catalyst adds only two atoms of this element to alkynes instead of four. A "standard" electrode named for this element is used as a zero reference to compare other electrode potentials. An isotope of this element is found in heavy water while another isotope of it is tritium. For 10 points, name this element which is produced with oxygen in electrolysis, where water is split into its constituents, and that has atomic number one.

ANSWER: hydrogen [prompt on deuterium; prompt on tritium]

239-13-96-05133

3. This leader described Vietnam as "the rotten country" and started a boycott of the European Economic Community that led to the Empty Chair Crisis. He pulled his country out of NATO in 1966, four years after he escaped an assassination attempt engineered by the Secret Army Organization. His presidency was weakened by a series of protests in May of 1968. This leader's government signed the Evian Accords to grant Algeria independence. For 10 points, name this first president of France's Fifth Republic, who led the Free French forces during World War II.

ANSWER: Charles Andre Joseph Marie de Gaulle

186-13-96-05134

4. One character in this story refers to a home with a secret panel in which silver was hidden from Sherman's troops. In this story, a restaurant is advertised with a series of highway signs that read, "A VETERAN!" and "THE FAT BOY WITH THE HAPPY LAUGH." That restaurant's owner, Red Sammy Butts, is insulted by June Star in this story, in which the cat Pitty Sing causes a car accident. For 10 points, name this short story in which a criminal called The Misfit murders a family on a road trip, written by Flannery O'Connor.

ANSWER: "A Good Man Is Hard to Find"

030-13-96-05135

5. In this novel, the disc jockey Lenny Shepherd's dance with Doreen disgusts the main character. Dodo Conway is admired simply for having six children in this book, in which Philomena Guinea sponsors the main character. Buddy Willard breaks up with the main character in this novel. Its main character works as an intern for *Ladies' Day* before being committed to an asylum following electric shock treatment from Doctor Gordon. For 10 points, name this novel about Esther Greenwood, a work of Sylvia Plath.

ANSWER: *The Bell Jar*

030-13-96-05136

This is a calculation question. What is the only real solution to the equation “ $x^3 - 4x^2 + 8x - 32 = 0$ ”?

ANSWER: $x = \underline{4}$

What leader of the Green Mountain Boys teamed with Benedict Arnold to take Fort Ticonderoga?

ANSWER: Ethan Allen