

1. Pop Culture

Her latest album includes the songs “Sell Me Candy”, “Haunted”, and “Question Existing”. Born nineteen years ago, the name of her first hit song translated into English is “Play It Again”. That was followed with “If It’s Lovin’ That You Want”. Her albums are titled *Music of the Sun*, *A Girl Like Me*, and *Good Girl Gone Bad*. Name this singer who teamed up with Jay-Z on the song “Umbrella”.

ANSWER: Rihanna (accept (Robyn Rihanna) Fenty)

2. World Literature

This author wrote, “For a long time I used to go to bed early. Sometimes, when I had put out my candle, my eyes would close so quickly that I had not even time to say to myself: ‘I’m falling asleep.’” These are the opening lines in *Swann’s Way*, which in turn is the first volume in his seven volume masterpiece. Name this author of *À la recherche du temps perdu*, a title which has been translated as *In Search of Lost Time* and *Remembrance of Things Past*.

ANSWER: (Marcel) Proust

3. Algebra (30 Seconds)

Find the two points of intersection between the circle $x^2+y^2=4$ and the ellipse $x^2+4y^2=16$.

ANSWER: (0,2) and (0,-2) (either order as long as the zeroes come before the twos, accept any way of expressing those points)

4. Art/Architecture

This six-letter Italian term refers to a type of art that involves powdered pigments mixed only in water. It works best in dry climates, and several famous recent practitioners are Mexican. Ancient examples can be found in Pompeii and several other places. Name this type of painting done on wet plaster, which is why its name is the Italian word for 'fresh'.

ANSWER: Fresco

5. Chemistry (10 Seconds)

The answer is a letter. With a subscript E, it is equal to dividing the value with subscript F by the value with subscript B. With a subscript W, it has a value of 10^{-14} . The subscript C represents the same thing as the subscript E Q. When the subscript is A, it represents acid dissociation. When the subscript is S P, it represents the solubility product. Name this letter often used for constants which in chemistry denotes the dissociation constant for a system in equilibrium.

ANSWER: K

6. Religion/Mythology

Its enemies include weasels, who are immune to it. One way to kill it is to hold a mirror up to it, but people must be careful not to look at it. Its poison is strong enough to kill a person and the horse he is on with one bite. Roosters can kill it by crowing, but its eggs are laid by roosters. Name this monster with the head of a rooster and body of a snake.

ANSWER: Basilisk (or Cockatrice)

7. US History

Key points included Fort Bridger, Whitman Mission, and Fort Kearney. The Platte River also played a major role, and several people died trying to cross the Green River. Its use peaked in the 1840s, '50s, and '60s until the completion of the transcontinental railroad. Name this route that went West from Missouri.

ANSWER: (The) Oregon Trail

8. Geometry/Trigonometry (30 Seconds)

Ignore units, and give your answer in simple radical form. Find the length of the side of a square if it has the same area as an equilateral triangle with side length one.

ANSWER: 4^{th} Root of 3 Over 2 (do not accept Root 3 Over 2)

9. Language Arts

This four-letter word is used in the fields of psychology, chemistry, and finance. It can follow the words bail, convertible, or municipal, and it refers to a financial arrangement in which investors essentially loan money to a government or corporate entity. Give this term beginning with the letter B.

ANSWER: Bond

10. Astronomy/Earth Science/Geography

It often contains the letters O B A F G K M to denote different spectral classes. The side contains a decreasing linear scale or an increasing logarithmic scale, depending on whether magnitude or luminosity is used. The x-axis contains a decreasing logarithmic scale measuring temperature. Giants tend to fall to the upper right, while dwarfs are in the lower left. Name this diagram, named after a Danish and an American astronomer, used to catalog stars.

ANSWER: Hertzsprung-Russell (Diagram) (or H-R Diagram)

11. World History

Throughout much of the 1950s, this country suffered through a period known as The Violence after the assassination of Presidential Candidate Gaitán. It also had a Civil War at the beginning of the 20th Century which killed about one hundred thousand people. At the end of the war, Panama declared its independence. The country still suffers from violence, thanks in large part to drug trafficking. Name this country whose capital is Bogota.

ANSWER: Colombia

12. Calculus/Combinatorics (30 Seconds)

Find the x-coordinate of the maximum of the function y equals one over the quantity x^2+x+1

ANSWER: $-1/2$ (or $-.5$, do not accept positive answers)

13. British Literature

One of the protagonists of this novel is a lawyer. When he leaves England on a business trip, he keeps a diary for his fiancée, Mina. Mina is a close friend of Lucy Westenra, who is eventually killed by a wolf after suffering from several bizarre symptoms. Before being killed, Lucy is helped by a Dutch professor named Van Helsing. Name this novel written in 1897 by Bram Stoker.

ANSWER: Dracula

14. Music

This musical is based on a Margaret Landon novel. One of the lead characters, a widow, sings "This Is a Man", and eventually agrees not to return to England. The two best-known songs are "Getting To Know You" and "Shall We Dance?" This Rodgers and Hammerstein work often featured Yul Brynner. Name this musical about a British teacher in Siam.

ANSWER: (The) King And I

15. Biology

(Note to moderator: Oocytes is pronounce oh-oh-sites.) Some people are born with about one million of these. Many contain an antrum and are classified as Graafian. These groups of cells include granulosa which contain oocytes. Name these units found in the ovaries, each of which contains a potential egg.

ANSWER: (Ovarian) Follicle(s)

16. Technology

This keyword can be used to make sure that a variable only gets initiated once even if the instruction to initiate it occurs within a loop. It is also used to define a class for which the variables can retain their values outside the class. Give this term beginning with the letter S that is associated with things that do not change.

ANSWER: Static

17. Current Events

Researchers are hopeful that RTS S AS02D will prevent it, and Bill Gates has committed about one billion dollars to eradicate it. Consensus estimates claim that it kills about one million people each year and that the vast majority of the victims are young children. Name this disease common in sub-Saharan Africa whose prevalence can be lessened by ten dollar nets.

ANSWER: Malaria

18. Nonfiction

Some of his best-selling books have been based on interviews he conducted, including one with British nun Wendy Becket and another involving discussions about the Book of Genesis. He started out as a journalist before working for the Kennedy and Johnson administrations, and he often appears on PBS. His most recent book, from 2004, is subtitled *A Journalist and His Times*. Name this reporter who interviewed Joseph Campbell in *The Power of Myth*.

ANSWER: (Bill) Moyers

19. Physics (10 Seconds)

His name is used to describe enclosed spatial surfaces. These surfaces are used in the law named after him, which relates the source of a field inside an object and the flux through its surface. His name is also used for the c g s measurement of a magnetic field. Name this 19th Century German physicist and mathematician.

ANSWER: (Carl Friedrich) Gauss

20. US Literature

He is the protagonist in *A Way You'll Never Be*, *The Indian Camp*, *The End of Something*, and *In Another Country*. The son of a doctor, he serves as a Red Cross ambulance driver during World War One. All of the stories about him were compiled into a book in 1972, eleven years after the death of his creator. Name this short story character created by Ernest Hemingway.

ANSWER: Nick Adams (prompt on half the answer)

Tiebreakers:

This is equal to the time derivative of momentum. In classical physics, it is equal to the distance derivative of potential energy, though it is treated differently by modern physics. For pendulums, it varies directly with the sine of the angle between the string and the vertical, and for ideal springs it varies directly with the distance from equilibrium. One example of it is weight, and it can be measured using pounds. Name this quantity which equals mass times acceleration.

ANSWER: (Net) Force

(Note to moderator: Duquesne is pronounced Doo-Cane.) Early in his career, he surrendered Fort Mifflin and helped capture Fort Mifflin. At the end of his political career, he gave a speech supporting unity and warning against permanent alliances, and he then became a farmer. He presided over the Philadelphia Constitutional Convention in 1787. Name this Revolutionary War General who became the 1st President.

ANSWER: (George) Washington

Give the word that completes this Ben Franklin quote: "The definition of insanity is doing the same thing over and over and expecting different..."

ANSWER: Results