

1. Technology

At the age of sixteen, who used the fact that most new newspaper subscribers are newlyweds or new home owners to efficiently market subscriptions, netting himself eighteen thousand dollars? As a University of Texas freshman in 1984, he realized that a computer with seven hundred dollars worth of parts could sell for three thousand dollars, and he started a business that has made him the richest man under forty in the world. Name this man whose company sells computers without using a middleman.

ANSWER: (Michael) Dell

2. British Literature

Give the first and last name of the fictional character who says, "I neither want any thanks, nor merit any. It was nothing to do, in the first place, and I don't know why I did it, in the second." He is a legal assistant of Stryver, and he resembles Charles Darnay in Charles Dickens' A Tale of Two Cities.

ANSWER: Sydney Carton (prompt on Sydney or Carton)

3. Physics (30 Seconds)

Let the acceleration due to gravity equal 9.8 meters per square second, and pay attention to air resistance. Find the acceleration of an object in free fall if the force of gravity on it is 49 Newtons and the force of air resistance is 39 Newtons.

ANSWER: 2 meters per square second (or meters per second squared, do not accept meters per second) (accept -2) (downward)

4. Pop Culture

With what single uniform number would you associate Bronco Nagurski, Casey Stengel, Babe Ruth, Alex Rodriguez, and Allen Iverson? This number can be found on many bumper stickers thanks to the late Dale Earnhardt, Sr.

ANSWER: 3

5. Religion/Mythology

The son of Mercury and Venus, which young God was sometimes portrayed as blind or wearing armor? According to one story, he married and immortalized Psyche. Name the winged boy always depicted with a bow and arrows who made people fall in love.

ANSWER: Cupid (prompt on Desire, Eros, Amor, or Love)

6. United States History

Many people thought that Stephen Douglas supported this bill in order to win future Southern votes in a Presidential election. It led to several fraudulent state elections and some pre-Civil War fighting. Name this 1854 Act of Congress which repealed the Missouri Compromise.

ANSWER: Kansas-Nebraska (Act)

7. Algebra (30 Seconds)

Fully simplify the square root of one thousand eight hundred.

ANSWER: 30 Root 2 (accept equivalent)

8. Current Events

Which Arab nation has fought hard against its Islamist extremists, most notably during the Hama Massacre, which killed twenty thousand people? Many accuse it, however, of supporting anti-Israeli terrorists, and it has used its domination of Lebanon to attempt to regain the Golan Heights. Name this nation headed by President Bashar al-Assad which was hit by Israeli bombing on October 5th.

ANSWER: Syria

9. World Literature

He was a real king, and it is possible that his grave was found earlier this year by German archaeologists in Iraq. Portrayed as two-thirds god and one-third human, he was a cruel king until befriendng the wild man Enkidu. Name this man who may be the earliest protagonist in all of world literature, written about by the Sumerians over four thousand years ago.

ANSWER: Gilgamesh

10. Biology

Typically found in prokaryotes and yeast, what can be combined with favored DNA to make recombinant bacteria? This small ring of DNA is separate from the chromosome, and its name begins with the letter P.

ANSWER: Plasmid

11. Language Arts

What term was used for a short time in England to show that power was vested in the people? It is now used for Puerto Rico and the Northern Mariana Islands to denote that they are territories voluntarily associated with the United States, and it is also used in reference to many countries that used to be part of the British Empire. For no useful reason whatsoever, this term also is used to denote Kentucky, Massachusetts, Pennsylvania, and Virginia.

ANSWER: Commonwealth(s)

12. Music

Born in Chattanooga, who was discovered by Ma Rainey in 1912? Her first album was Down Hearted Blues, and she also sang the song "Nobody Knows You When You're Down and Out". A legend states that she died in a 1937 car crash because a hospital in Mississippi refused to treat Black people. Name The Empress of the Blues.

ANSWER: (Bessie) Smith (prompt on Empress of the Blues)

13. Geometry/Trigonometry (30 Seconds)

A and B are in the first quadrant. If the sine of A is $\frac{3}{5}$, and the sine of B is $\frac{12}{13}$, then find the sine of the quantity A+B. Express your answer as a fully simplified fraction.

ANSWER: $\frac{63}{65}$

14. World History

There are many theories as to why this man converted to Christianity: his wife's nagging, the survival of one of his children, in gracious victory, or to extend his empire. Maybe he was a true believer. Once he was baptized by Remigius around 500 AD, who was able to control most of what is now France and Germany?

ANSWER: Clovis (the First)

15. Astronomy/Earth Science/Geography

Which famous astronomer was kidnapped and raised by a wealthy uncle? He founded an observatory named Uraniborg, and before the invention of the telescope he accurately found the positions of 777 stars. Identify this Danish astronomer who before dying gave his work to his student Johannes Kepler.

ANSWER: (Tycho) Brahe

16. United States Literature

Give the first and last name of the man who justifies doing his job by saying, "Because if I didn't, then I couldn't hold my head up." He is a widower who hires Calpurnia to take care of his children. This Alabama lawyer defends Tom Robinson in Harper Lee's To Kill A Mockingbird.

ANSWER: Atticus Finch (prompt on Atticus or Finch)

17. Chemistry (10 Seconds)

Which constant often used in thermodynamics is named after a nineteenth century Austrian? It has a value of 1.38 times ten to the negative twenty-third Joules per Kelvin, and it is usually represented by a lower-case k.

ANSWER: Boltzmann('s Constant) (prompt on k)

18. Calculus/Math History (10 Seconds)

This philosopher from the fifth century BC appears in a dialogue by Plato. Very good at finding contradictions in other people's arguments, he is often associated with his argument that an object can never get to a certain point because it would have to get halfway there an infinite number of times. Name this man who wrote down forty paradoxes.

ANSWER: Zeno (of Elea)

19. Art/Architecture

The dark object on the left extending skyward may be a cypress tree. The Moon is yellow and the sky has swirls, but the town in the lower right corner seems peaceful. Identify this 1889 painting by Vincent Van Gogh.

ANSWER: (Starry,) Starry Night

20. Nonfiction

What controversial 1965 book was written by a then little-known consultant for the Department of Labor? The book was an attack on the Corvair specifically and the auto industry in general, and it launched the career of Ralph Nader.

ANSWER: Unsafe At Any Speed

NOTE: These questions are for breaking ties. If you need to replace a question, use the corresponding question from the Replacement packet. In a tiebreaker, the first correct answer wins the match.

Tiebreaker #1

What eight-letter name is commonly given to the mathematical series that was the subject of a famous proof in the fourteenth century? Nicole Oresme put the first term in the first group, the next two terms in the

second group, the next four terms in the third group, and so on. Because each group is greater than or equal to one-half, the sum diverges. Name the infinite series that includes one-half plus one-third plus one-fourth, etcetera.

ANSWER: Harmonic (Series)

Tiebreaker #2

Give the first and last name of the fictional character who said, "I am an omnivorous reader with a strangely retentive memory for trifles." That quote comes from *The Adventure of the Lion's Mane*. He was the protagonist in sixty adventures and lived at 221b Baker Street.

ANSWER: Sherlock Holmes (prompt on Sherlock or Holmes)

Tiebreaker #3

Which state uses the postal abbreviation MN?

ANSWER: Minnesota