

Replacement 1. US Literature

Her earliest books include *Going Home* and *Passion's Promise*, and her latest books include *The House* and *Coming Out*. She soon will finish her seventieth novel, and her books have sold over five hundred million copies. Name this romance novelist who is always on bestseller lists.

ANSWER: (Danielle Schuelein-)Steel

Replacement 2. Calculus/Combinatorics (10 Seconds)

The answer is an eight-letter word. When it does not equal zero, it is perpendicular to the level curve or level surface. It is found by taking the partial derivative of a given function with respect to each variable separately. Name this term also called del that is represented by an upside down delta and is related to slope.

ANSWER: Gradient(s) (Prompt Del)

Replacement 3. Music

The playing of this instrument was greatly influenced by Carlos Salzedo. Classified as angular or arched, this orchestral string instrument is the only one in which the strings are not parallel to the resonator. Name this instrument that contains seven double-action pedals and about forty-six strings and is about six feet tall.

ANSWER: Harp

Replacement 4. Chemistry (10 Seconds)

(Note to moderator: pH should be pronounced as two separate letters.) Tumeric curcumin, congo red, alizarin yellow R, indigo carmine, and anthocyanins are all examples. These generally are weak acids with strong colors, and it is important that the different ions in the compound are different colors. Depending on which ions bind to dissociated water, the solution they are in will turn one color or the other. What term is used to describe these compounds used to determine the pH of a solution?

ANSWER: (pH) Indicator(s)

Replacement 5. Religion/Mythology

Her wedding took place on Mount Pelion and was attended by many Gods. Unfortunately, Eris was not invited. There was a prophecy that her son would be greater than his father, so she married the mortal Peleus. Name this sea nymph who almost brought immortality to her son Achilles.

ANSWER: Thetis

Replacement 6. Algebra (30 Seconds)

Factor the expression  $3x^2-23x+14$ .

ANSWER:  $(3x-2)(x-7)$  (accept  $(x-7)(3x-2)$  but not other combinations)

### Replacement 7. World History

It started in 1958, and exaggerated successes from that year led to bad decisions that caused massive problems over the next few years. Many steel plants were constructed, and a lot of agricultural products were never picked from the fields because farmers were busy with industrialization. Bad weather and deals to export grain over the next few years led to massive famines that killed millions of people. Name this five year plan created by Mao Tse-Tung.

ANSWER: Great Leap Forward (accept Great Leap Famine or Dàyuèjìn)

### Replacement 8. Technology

The first design for one of these came in the early eighteenth century from Swedenborg, but the first public demonstration of one carrying passengers came in 1959. They have never become popular because they use a lot of fuel, though they are still used in some places to carry people over water that sometimes freezes over. These objects require a skirt around the bottom in order to function. Name these objects that stay afloat by propelling lots of air downward.

ANSWER: Hovercraft (accept ACV or Air Cushion Vehicle)

### Replacement 9. Pop Culture

This 1967 film was based on a novel by Donn Pearce. The main character is in prison for breaking parking meters. It won a Supporting Actor Oscar for George Kennedy. Name this picture starring Paul Newman.

ANSWER: Cool Hand Luke

### Replacement 10. World Literature

This writer said: “The stupidity of people comes from having an answer for everything. The wisdom of the novel comes from having a question for everything.” In 1979, he completed *The Book of Laughter and Forgetting*. This Czech writer moved to France in 1975 to avoid Communism. Name this writer best known for *The Unbearable Lightness of Being*.

ANSWER: (Milan) Kundera

### Replacement 11. Biology

The year of his birth is unknown, but we know he died in 1861, three years after completing his famous book. He updated his work in 1860, and others have continued to do so, so that his book is now in its 39<sup>th</sup> edition. Name this British student who created a famous anatomy textbook.

ANSWER: (Henry) Gray

Replacement 12. Language Arts

This eight-letter synonym of reserved means 'restrained in expression or appearance'. Give this word beginning with the letter R used to describe people who do little to express themselves.

ANSWER: Reticent

Replacement 13. Geography/Astronomy/Earth Science

August 17, 1999 in Turkey; January 26, 2001 in India; December 26, 2003 in Iran; December 26, 2004 in the Indian Ocean; March 28, 2005 in Sumatra; October 8, 2005 in Kashmir; May 26, 2006 in Java. Name the natural disaster that has occurred on these dates at these places.

ANSWER: Earthquake(s)

Replacement 14. Current Events

This nation declared its independence in 1991 and had a Rose Revolution in 2003, but it still has two bases that will be controlled by its former occupier until 2008. Tensions have risen recently thanks in large part to arrests made by this nation on September 27<sup>th</sup>, which were followed by Russian crackdowns on its immigrants and business owners. Name this former Soviet Republic that borders Turkey, Armenia, and Azerbaijan.

ANSWER: Georgia

Replacement 15. Geometry/Trigonometry (30 Seconds)

Include units in your answer. What is the length of the longest diagonal going through a hexagonal prism in which each of the edges has a length of one centimeter?

ANSWER: Root 3 cm

Replacement 16. British Literature

He spent the last twenty-five years of his life in Cambridge, completing the libretto for *Billy Budd* and an essay collection titled *Two Cheers for Democracy*. Much earlier, after graduating from Cambridge in 1901, he spent some of his time traveling in Italy, which inspired his novels *Where Angels Fear To Tread* and *A Room With A View*. Name this author of *Howards End* and *A Passage To India*.

ANSWER: (Edward Morgan) Forster

Replacement 17. Nonfiction

Like his teacher Leucippus, although he was reasonably popular during his time, his works were later criticized and very little remains. Plato was particularly critical. Aristotle saw him as a rival, especially in the area of natural philosophy. Name this man sometimes known as the laughing philosopher who wrote about indivisible elements he called atoms.

ANSWER: Democritus

Replacement 18. Physics (10 Seconds)

The answer is a thirteen-letter word. This principle only applies to situations based on linear differential equations. For fields, it states that the total effect of several fields at a point can be found by adding the effect of each field. For waves, it states that total displacement is equal to the algebraic sum of each displacement. Name this principle often associated with wave interference.

ANSWER: Superposition

Replacement 19. Art/Architecture

Saint Mark's in Florence contains several frescoes by and a museum dedicated to this artist. He also did several paintings for Pope Nicholas the Fifth which are still at the Vatican. Name this early fifteenth century painter who was a monk.

ANSWER: (Il Beato or The Blessed Fra) Angelico (accept (Fra Giovanni da) Fiesole)

Replacement 20. US History

Give a specific answer. Its headquarters can still be found on Chestnut Street in Philadelphia. It was headed for most of its existence by Nicholas Biddle, and one of its cashiers was named James McCulloch. Given a twenty year charter during Madison's Presidency, it barely survived that long because of opposition from Andrew Jackson. Name this financial institution.

ANSWER: (The) Second Bank of the United States