

### 1. Pop Culture

Since being selected out of Oregon State in the 2<sup>nd</sup> Round of the 2001 Draft, he has been to four Pro Bowls. In the second game this season, he caught eleven passes for over two hundred yards, but his team still lost to Cleveland. Last year, he performed the Chicken Dance on and off the field. He has also done a Riverdance and the Shawne Merriman Sack Dance. He once tried changing his name to Ocho Cinco and got a blond mohawk. Name this wide receiver for the Cincinnati Bengals.

ANSWER: (Chad) Johnson

### 2. World Literature

He has a flat nose, with two deep nostrils and enormous whiskers. The son of a prostitute and born in a prison, he has a lot of respect for authority and hatred of rebellion. He becomes very suspicious of Monsieur Madeleine, and his suspicions are eventually confirmed when he learns Madeleine's true identity. This inspector does not understand why a criminal shows him mercy or why he returns the favor. Name this character from Victor Hugo's *Les Misérables*.

ANSWER: (Inspector) Javert

### 3. Algebra (10 Seconds)

(Note to moderator: Archimedes is pronounced Ar-keh-MEE-dees, and Fibonacci is pronounced Fib-eh-NAH-chee.) An implicit equation for the graph of this shape is the square root of the quantity  $x$  squared plus  $y$  squared equals the arctangent of the quantity  $y$  over  $x$ . Different variations of this shape are named after Fermat, Archimedes, and Fibonacci. Using a parameter, it can be represented with the equations ' $x$  equals  $t$  times cosine  $t$ ' and ' $y$  equals  $t$  times sine  $t$ '. Using polar coordinates, the simplest way to express it is  $r$  equals  $\theta$ . Name this shape that moves around and outward.

ANSWER: Spiral(s) (accept longer answers involving Archimedes)

### 4. Art/Architecture

(Note to moderator: Frieze is pronounced Freeze.) Many of his family members died when he was young, inspiring works such as *Death in the Sickroom* and *The Sick Child*. Many critics view his works as a bridge between Impressionism and Expressionism, and he generally is regarded as the greatest artist ever from his country. He collected many of his works into a cycle titled *Frieze of Life*, and he donated most of his paintings to the city of Oslo. His best known painting shows a man with his mouth wide open and his hands on his head. Name this Norwegian who painted *The Scream*.

ANSWER: (Edvard) Munch (pronounced Moonk)

5. Chemistry (30 Seconds)

Balance this chemical reaction using the smallest positive integers possible: Benzene and oxygen gas yield carbon dioxide and water.

ANSWER: 2 Benzene + 15 Oxygen (yield) 12 Carbon Dioxide + 6 Water (allow different wordings and the use of chemical symbols. Benzene is  $C_6H_6$ , Oxygen is  $O_2$ , Carbon Dioxide is  $CO_2$ , and Water is  $H_2O$ . Also accept the numbers 2 15 12 6 in order.)

6. Religion/Mythology

(Note to moderator: Hermes has two syllables, Zeus has one, and Odysseus has four.) She lives in a cave with a grape vine, four fountains, and many trees with nesting birds. She was alone weaving when Hermes arrived with a message from Zeus, and she spent the next several days preparing a voyage for a man she had spent seven years with. Name this nymph who delayed the return trip of Odysseus.

ANSWER: Calypso

7. US History

He claimed that one President from his Party offered “a dime store New Deal,” and said another had, “a tendency to dabble and dabble and argue on very nebulous grounds like executive privilege and confidentiality when all the American people wanted to know was the truth.” When he ran for President, he said, “Extremism in the defense of liberty is no vice.” He won only six states, and he later returned to the Senate, where he represented Arizona. Name this Republican who ran in the 1964 Election.

ANSWER: (Barry) Goldwater

8. Geometry/Trigonometry (30 Seconds)

Find the cosine of the base angle of an isosceles triangle if the base of the triangle is two units, and each of the other sides is three units.

ANSWER:  $1/3$

9. Language Arts

This term is a synonym of mediation, but it sometimes is binding. It describes a procedure, often used in labor disputes, in which two sides of an argument are presented to a neutral third party. The pendulum version is sometimes used by Major League Baseball. Give this term beginning with the letter A.

ANSWER: Arbitration

10. Astronomy/Earth Science/Geography

Give a two-word answer. The Cascadia is associated with volcanos in Washington and Oregon, the Kuril is associated with earthquakes near Japan, and the Sunda is associated with earthquakes and volcanoes near Indonesia. These areas are often associated with deep trenches. Name these regions where one tectonic plate slides under another tectonic plate.

ANSWER: Subduction Zone(s) (prompt Plate Boundary or equivalent)

11. World History

Sixteen years after overthrowing the Fatimid dynasty in Egypt, he defeated King Guy at the Battle of Hattin, which took place in present-day Israel. A few months later, he took control of Jerusalem, though he eventually signed a treaty allowing pilgrims after the Third Crusade. Name this Muslim leader from the 12<sup>th</sup> Century.

ANSWER: Saladin (or Salah al-Din)

12. Calculus/Combinatorics (10 Seconds)

If  $V$  is the expected value, this can be graphed using the function  $y$  equals  $e^{-v}$  times  $v^x$  divided by  $x$  factorial. Named after a 19<sup>th</sup> Century French mathematician, this graph is useful when the average value and the lower limit are close together. Name this distribution which gives an asymmetrical bell curve.

ANSWER: Poisson (Distribution)

13. British Literature

This play involves an old merchant looking for his wife Emilia. The merchant, Aegeon, explains how he lost part of his family in a shipwreck. He ends up in Ephesus, which at first seems like a tragedy because he is from Syracuse. There is a lot of confusion throughout the story due to a lot of mistaken identities. Name this Shakespeare work involving two pairs of identical twins.

ANSWER: (The) Comedy of Errors

14. Music

Named after its creator, this instrument was originally used in military bands in the mid-19<sup>th</sup> Century. It now is often associated with jazz, and some of its most famous players have been Coleman Hawkins, Ornette Coleman, and Charlie Parker. Though classified as a woodwind, it usually is made out of brass. Name this instrument with a large bell that faces up.

ANSWER: Saxophone

### 15. Biology

This organ is connected to the cystic duct, which joins the hepatic ducts. It is easy to locate during dissection because of its dark green color. When fat enters the digestive tract, this organ releases its contents, which are produced in the liver, to aid in digestion. If its contents crystallize, the results are very painful. Name this organ that stores bile.

ANSWER: Gall Bladder (accept Cholecyst, prompt Gall, do not accept Bladder)

### 16. Technology

Some of the programs this corporation has taken over are Fractal Painter, WinZip, and QuattroPro. It also bought WordPerfect from Novell. Its best selling product is a software suite that includes Capture, PowerTrace, and Photo-Paint. Name this company that produces a vector graphics editor whose title combines the company's name with the word Draw.

ANSWER: Corel

### 17. Current Events

He was first elected mayor at the age of thirty-one, and a panel of historians would label him the seventh worst big-city mayors in American history. He has been a member of Congress since 1997, where he is the only vegan. He is now the only Democrat running for President who voted against authorizing the war in Iraq, and he is the only one calling for universal single payer health insurance. Name this Congressman from Ohio.

ANSWER: (Dennis) Kucinich

### 18. Nonfiction

Father Wilhelm Kleinsorge played a major role in organizing this book, and he is one of the six main characters described in it. He was blown out of a three-story building but then helped people who had been harmed more than him. Originally written as an article that filled an entire issue of *The New Yorker*, it quickly became a national sensation in 1946. Name this work by John Hersey that describes the effects of an atomic bomb.

ANSWER: Hiroshima

### 19. Physics (30 Seconds)

If you assume there is no friction and that the acceleration due to gravity is 9.8 meters per square second, find the acceleration of an Atwood Machine that has a 25 kilogram and a 75 kilogram mass hanging from it. An Atwood Machine consists of a single pulley, with the two masses hanging from opposite ends of a single string running over it.

ANSWER:  $4.9 \text{ m/s}^2$  (prompt units if necessary, accept meters per square second or meters per second squared, but not just meters per second)

20. US Literature

The action of this novel takes place from 1999 to 2026. During that time, there is a horrible chickenpox epidemic, a major migration, and an atomic war. Written in 1950 as short stories within a frame narrative, it includes *There Will Come Soft Rains*, *The Naming of Names*, and *Rocket Summer*. Name this work by Ray Bradbury.

ANSWER: (The) Martian Chronicles

Tiebreakers:

This town houses the Urn Tomb, the Palace Tomb, the High Place of Sacrifice, and Al Khazneh. Al Khazneh means The Treasury in English, and it is accessible through a gorge known as The Siq. This archeological site has large structures carved into its reddish rocks. Name this former city located in Southwest Jordan.

ANSWER: Petra

It uses a microkeratome, and it can result in diffuse lamellar keratitis, which is also known as Sands of Sahara Syndrome. This process usually is performed with the patient sedated but awake. It usually is done by ophthalmologists. Identify this type of surgery whose name is a five-letter acronym.

ANSWER: LASIK (accept Laser Assisted In Situ Keratomileusis or Laser-Assisted Stromal In-situ Keratomileusis)

Give the word that completes this Ben Franklin quote: "Honesty is the best..."

ANSWER: Policy