### 1. Earth Science/Geography/Astronomy

Adjustments in October 1582 and September 1752 were very unpopular. Based on a cycle of 146,097 days, this system is named after the Pope who was in power when it came into popular use. Name this correction to the Julian calendar which is now the standard calendar of the Western world.

ANSWER: Gregorian (Calendar) (prompt on calendar)

### 2. Language Arts

In the United States, this word refers to clerks in the Navy. In Britain, it refers to retired military members who are enlisted to protect either the Tower of London or royalty, active petty officers who assist a navy officer, or people who are not a member of the gentry but enjoy some privileges. It can also refer to someone who provides great and laborious services. Give this word beginning with the letter Y.

ANSWER: Yeoman

# 3. Geometry/Trigonometry (30 Seconds)

Include units in your answer. Find the perimeter of a rhombus if the lengths of its diagonals are 6 centimeters and 8 centimeters.

ANSWER: 20 centimeters

### 4. United States History

Though it doesn't sound like it, this was named after Metacomet, who eventually was drawn and quartered and had his head exposed on a pole. One in ten soldiers on both sides were injured or killed, and the effects were devastating to Indian tribes in Southern New England. Name this armed conflict that took place in 1675 and 1676.

ANSWER: King Philip's War (or King Philip's Uprising, prompt on King Philip)

### 5. World Literature

Which writer's most famous work is about a coal miners' strike in the 1860s? Considered a founder of the school of naturalism, most of his novels followed two branches of a family. Name this author of *Germinal* who played a major role in The Dreyfus Affair.

ANSWER: (Emile) Zola

# 6. Chemistry (10 Seconds)

What is made out of hexagonal carbon sheets? One of the softest minerals, it can be used as a lubricant. The name of this substance comes from the Greek word meaning to draw or write. Name this substance used in pencils.

ANSWER: Graphite

### 7. Pop Culture

(Note: The O at the end is a letter, not a number.) Who was the best player for the Cincinnati Royals? In his second year after graduating from the University of Cincinnati, he averaged 30.8 points, 12.5 rebounds, and 11.4 assists per game. He did not win his first title until teaming with Kareem Abdul-Jabbar on the Milwaukee Bucks in 1971. Name this player nicknamed "The Big O".

ANSWER: (Oscar) Robertson

# 8. Calculus/Combinatorics (30 Seconds)

Give your answer as a fully simplified fraction. If you roll two standard dice, what is the probability that the

sum is greater than seven?

ANSWER: 5/12

### 9. Nonfiction

Who won the Nobel Prize for Literature in 1950 even though he was a nonfiction writer? 1950 was the same year he published a collection titled *Unpopular Essays*. In 1901, he discovered a paradox by considering the set of all sets that are not members of themselves. The paradox arises when one considers whether that set is a member of itself. Name this analytic philosopher who teamed up with Alfred North Whitehead to write *Principia Mathematica*.

ANSWER: (Earl Bertrand Arthur William) Russell

### 10. Technology

The answer is four letters long—it is a word that can also be used as a prefix. The first one of these was created by Ward Cunningham in 1995 at the website known as the Portland Pattern Repository. Among the popular engines that make these possible are UseMod and MoinMoin. What is the name for collaborative web sites that allow users to edit and add content?

ANSWER: Wiki(s)

#### 11. Music

(Note to moderator: No singing; nothing personal.) The answer is one word, and the movie version is different. Which song is performed in a musical starting with the musical's title character, then by the Secretary of the Interior, then the Secretary of Labor, and then the President? It is in a musical that opened on Broadway in 1977 and is set in the 1930s, and it exemplifies optimism. Name this song in which President Roosevelt sings: "When I'm stuck with a day That's gray and lonely I just stick out my chin And grin, and say..."

ANSWER: Tomorrow

# 12. Physics (10 Seconds)

Which quantity's derivative with respect to time is equal to torque? It is more common to express it as the mass times cross product of displacement from the origin with velocity. Give the two-word title of this conserved quantity which is equal to moment of inertia times angular velocity.

ANSWER: Angular Momentum (do not accept half the answer)

#### 13. United States Literature

Which writer's first big success came when Teddy Roosevelt read his poem "Children of the Night"? He described one of his most popular characters as a, "child of scorn, grew lean while he assailed the seasons; he wept that he was ever born, and he had reasons." Another character on a, "calm summer night went home and put a bullet through his head." Name this creator of Miniver Cheevy and Richard Cory.

ANSWER: (Edwin Arlington) Robinson

#### 14. Art/Architecture

Who considered his greatest teacher to be Trissino? He often studied Roman works rather than Renaissance works. Known for designing many villas, in 1570 he published *The Four Books of Architecture*, which is still in print. Name this architect who also designed several churches in Venice.

ANSWER: Palladio (or Andrea di Pietro della Gondola)

### 15. World History

At the request of Pope Hadrian The Second, he defeated Desiderius and took over Lombardy. A big supporter of academic learning, this leader imported teachers into his empire, creating precursors of modern major European universities. Name this father of Louis The First who in 800 was crowned Emperor of the Romans. He is considered a founding father of both France and Germany.

ANSWER: Charlemagne (accept Charles The Great or Carolus Magnus)

### 16. Biology

(Note to moderator: lipase is pronounced lie-pase and protease is pronounced pro-tee-ase.) A disorder with which organelles can cause Tay-Sachs disease? Produced in the Golgi apparatus, they are found in the cytoplasm. Name these saclike structures that contain lipase, protease, and other enzymes used for cell digestion.

ANSWER: Lysosome(s)

## 17. Religion/Mythology

Which English title can refer to Bardo Thodol or The Papyrus of Ani? The Bardo Thodol, from Tibet, is supposed to be recited by lamas to explain to souls what will happen to them before rebirth. The Papyrus of Ani, from Egypt, was intended to guide souls on the way to the underworld.

ANSWER: (The) Book of the Dead

### 18. Algebra (30 Seconds)

There are four solutions to the following equation. Give the largest solution:

 $x^4$ -13 $x^2$ +36=0. Give only the largest solution.

ANSWER: 3

#### 19. Current Events

Who concluded a recent letter with the words: "Out West, where you vacation, the aspens will already be turning. They turn in clusters, because their roots connect them. Come back to work---and life. Until then, you will remain in my thoughts and prayers." This letter was written to Judith Miller, and after receiving it she decided to talk to Patrick Fitzgerald. Name this man who resigned as Dick Cheney's Chief of Staff after receiving five indictments.

ANSWER: (Irv Lewis 'Scooter') Libby

# 20. British Literature

Which 1820 novel includes the women Rebecca and Rowena? Set in the twelfth century, it plays up conflicts between the Saxons and Normans. The novel revived interest in the "King of Outlaws and prince of good fellows" named Robin Hood. Name this work by Sir Walter Scott.

ANSWER: Ivanhoe

TIEBREAKER: To break a tie, use the following questions in order. The first correct answer wins the match.

(30 Seconds) Find the radius of the circle formed by taking the set of all points that are twice as far from the point (-3,0) as they are from the point (3,0).

ANSWER: 4

Any English translation is considered unofficial, but this book opens with an invocation that ends: "Keep us on the right path. The path of those upon whom Thou hast bestowed favors. Not the path of those upon whom Thy wrath is brought down, nor of those who go astray." The Opening is followed by chapters named The Cow, The Family of Imran, and so forth for a total of 114 chapters, or suras. Name this book written in the seventh century which is the holiest book of Islam.

ANSWER: (The or Al) Koran

Which chemical element has atomic mass 28.09, atomic number 14, and atomic symbol Si?

ANSWER: Silicon (Prompt Si)