## 1. Technology

What are 32 feet long, 8 feet high, 60 tons, and capable of traveling over forty miles per hour with four people inside? Named after a former Army Chief of Staff, about 9000 of these machines have been made by the United States at a cost of over four million dollars each.

ANSWER: (M1) Abrams (Main Battle Tank(s)) (prompt on M1 and/or Tank)

## 2. British Literature

Whose poems include a 131-section work about his friend Arthur Hallam, a series of twelve connected poems about the legend of King Arthur, and a work comparing death to crossing a sandbar? Name this Early Victorian poet who wrote "In Memoriam" and "Idylls of the King".

ANSWER: (Alfred, Lord) Tennyson

## 3. Physics (30 Seconds)

Find the mass of an object in kilograms if a centripetal force of 100 Newtons is required to keep it moving in a circle with a radius of 2 meters at a speed of 5 meters per second.

ANSWER: 8 (Kilograms)

## 4. Pop Culture

Give the full name of the team - location and nickname. Thanks to a great game from Manu Ginobili, which team took the Los Angeles Lakers to double overtime Thursday night before losing? Due to injuries, they were missing star players Tony Parker and Tim Duncan. Name the defending NBA Champion.

ANSWER: San Antonio Spurs (prompt on San Antonio or Spurs)

## 5. Religion/Mythology

Which prophet worked between 742 and 687 BC ? His earliest writings describe the moral breakdown of Jerusalem, while some of his later writings may have been done by his disciples. This prophet is often quoted by Christians because of parallels between his prophecies and the New Testament Gospels.

ANSWER: Isaiah

## 6. United States History

Which city was invaded on September 2, 1864? The successful takeover almost guaranteed Lincoln's reelection, and it led to the March to the Sea by the victorious General, William Tecumseh Sherman.

ANSWER: Atlanta
7. Algebra (10 Seconds)

What nine-letter word is used to describe functions that have different rules for different parts of the domain? They are often written with the aid of a big curly bracket. This term begins with the letter P.

ANSWER: Piecewise

## 8. Current Events

During a nationally televised speech on September $7^{\text {th }}$, how much money did President Bush ask for? Most of the money is to support the military and has not been controversial, but many members of Congress
questioned how much money should be paid to rebuild Iraq, which Bush approximated as eighteen billion dollars. Congress overwhelmingly approved the money this week.

ANSWER: $\$ 87$ Billion (accept $\$ 871 / 2$ Billion)
9. World Literature

Which collection consists of about 90 novels and novellas, with about 2500 named characters and 500 unnamed characters, all written by the same author? It was supposed to show the entirety of contemporary society during the nineteenth century. Identify this collection by Balzac.

ANSWER: (The) Human Comedy (or (La) Comedie Humaine)

## 10. Biology

Which phylum is characterized by an exoskeleton, jointed appendages, and a body formed of distinct groups of segments? The most diverse animal phylum, it includes arachnids, crustaceans, and insects.

ANSWER: Arthropod(a or -s)

## 11. Language Arts

Invented by Montaigne, this noun comes from the French for 'attempt' because it is an attempt to inform. Usually classified as familiar or formal, which word often is used for short pieces of prose?

ANSWER: Essay
12. Music

His grandfather was a Jewish philosopher, and his father was a banker who converted to Christianity. Name this nineteenth century German composer who wrote "Songs Without Words". He also wrote Midsummer Night's Dream, which contained The Wedding March.

ANSWER: (Felix) Mendelssohn
13. Geometry/Trigonometry (30 Seconds)

Ignore units. Find the area of the circle given by the polar equation $r$ equals 10 times the sine of theta.

## ANSWER: 25 Pi (Square Units)

## 14. World History

Who was the foreign commissar of the Soviet Union under Lenin? Born with the last name Bronshtein, he took the name he is best known as from a forged passport used to escape Siberia. Deceived about the date of Lenin's funeral, he lost the ensuing power struggle to Stalin. Name this communist leader who was eventually exiled from the Soviet Union and murdered in Mexico with a pick-axe.

ANSWER: (Leon) Trotsky (accept Bronshtein on early buzz)

## 15. Astronomy/Earth Science/Geography

Which geology term can be described by its direction as cubic, prismatic, or basal? Its ease can be described as perfect, imperfect, distinct, or difficult. This is the tendency of crystals to split into fragments bounded by plane surfaces.

## 16. United States Literature

Give the first and last names of the character who, in a fit of rage, throws a radio out a window and then hits his pregnant wife. This Polish immigrant lives in New Orleans and cannot stand his sister-in-law Blanche Dubois. Name this character from Tennessee Williams' A Streetcar Named Desire.

ANSWER: Stanley Kowalski (prompt on Stanley or Kowalski)

## 17. Chemistry (30 Seconds)

Round your answer to the nearest percent. By what percentage will the pressure of a gas increase if its number of moles and volume is held constant and its temperature is increased from 26.85 degrees Celsius to 86.85 degrees Celsius?

ANSWER: 20(\%)

## 18. Calculus/Math History (10 Seconds)

Which seventh century mathematician may have been the first one to systematize calculations with negative numbers? A formula which bears his name finds the area of a cyclic quadrilateral. Name this Hindu mathematician.

ANSWER: Brahmagupta

## 19. Art/Architecture

Prisoners From the Front, Snap the Whip, The Life Line, Kissing the Moon, Northeaster, and Breezing Up were all painted by which artist? Influenced by a trip to the North Sea coast in 1881, he spent most of his time in Maine, Florida, and Bermuda after that. Name this painter famous for seascapes.

ANSWER: (Winslow) Homer (prompt on seascapes)

## 20. Nonfiction

Who started out as an Athenian general in 424 BC but was exiled because of his military failure? He then spent much of the rest of his life recording the downfall of Athens. Name this historian of the Peloponnesian War.

ANSWER: Thucydides
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
Which thirteen-letter word refers to the state of being the firstborn child? It is often associated with inheritances and begins with the letter P .

ANSWER: Primogeniture
Tiebreaker \#2
The common definition of this word is lack of activity. In physics, which word refers to a property of matter by which it remains at rest or in uniform motion in the same straight line unless acted upon by some external force? It begins with the letter I.

ANSWER: Inertia

Tiebreaker \#3
Which state uses the postal abbreviation CT?
ANSWER: Connecticut

