

Illinois Coaches Association

1996 Tournament Round 4

TRIAD QUESTIONS

1.

TOSS-UP SOCIAL STUDIES

When Thomas Brudenell, the Earl of Cardigan, received the order from Lord Raglan he begged to be let out of it. It was ordered in a foolish attempt to recapture the Turkish guns the Russian army had captured and ended in the death of half of his hussar brigade. For ten points name this charge which occurred at the battle of Balaklava during the Crimean War.

ANSWER—(Charge of the Light Brigade)

1.

BONUS SOCIAL STUDIES

Identify the following documents in English history.

1. Although London was not included, this 1086 survey ordered by William the Conqueror had a virtually complete census and property listing for all of England.
2. Also known as the Great Charter, this sixty-three clause document signed by King John guaranteed that the King would uphold certain rights of his barons.
3. This act passed during the reign of Henry VIII declared that the king was "Supreme Head of the Church of England" and that the Pope was no longer acknowledged as the leader.

ANSWER—1. (Doomsday Book) 2. (Magna Carta or Magna Charta) 3. (Act of Supremacy)

2.

TOSS-UP SCIENCE

Originally known as the S-1 committee, one of the most interesting supplies they requisitioned was 10,000 tons of silver from Fort Knox due to a copper shortage. More impressively, in 1944 it was using five percent of the total electrical output in the United States. For ten points name this project which developed the atomic bomb.

ANSWER—(Manhattan Project)

2.

BONUS SCIENCE

Answer the following questions relating to one of the new techniques to view the inside of the body, NMR or nuclear magnetic resonance.

- 1 - 4. Name the four elements which are most commonly studied in NMR, which have atomic numbers one, six, nine and fifteen.
5. Name the man, presently at the University of Illinois, who in 1973 discovered what is known as NMR imaging or magnetic resonance imaging.

ANSWER—1-4. (Hydrogen, Carbon, Fluorine and Phosphorus) 5. (Paul Lauterbur)

3.

TOSS-UP FINE ARTS

After this man had shown Joseph Haydn the set of string quartets he had written and dedicated to the master, they sat down and played them and then Joseph went up to the composer's father, Leopold, and told him "Your son is the greatest composer I know". For ten points name this great Austrian who also wrote the operas *Mitridate* and the *Marriage of Figaro*.

ANSWER—(Wolfgang Amadeus Mozart)

3.

BONUS FINE ARTS

Identify the following pieces of music from a description.

1. Inspired when he saw Harriet Smithson, who was playing Ophelia in a production of Hamlet, this most famous symphony by Berlioz tells in five movements of his unsuccessful yearning for her.
2. Originally a ballet written for Ida Rubinstein, this piece consists of a repeating theme in C major with a gradual crescendo and made Maurice Ravel famous.
3. A tribute to his dead mother, this Johannes Brahms's work has been 'ranked among the loftiest music ever given to the world.' Name this Requiem that includes the choruses 'Blessed Are the Dead' and 'For All Flesh is as Grass.'
4. Including Dies irae and Agnus dei from the Latin mass, it also includes some poems of Wilfred Owen such as Strange Meeting. For ten points name this Requiem by Benjamin Britten, written for the unveiling of St. Michael's Cathedral in Coventry, which was destroyed during World War II.

ANSWER—1. (Symphonic Fantastique) 2. (Bolero) 3. (A German Requiem)
4. (War Requiem)

4.

TOSS-UP LITERATURE

This autobiographical novella was inspired by the author's adventures as a mariner. The character of Marlow is patterned after the author and a Mr. Georges Klein is the basis for Kurtz. Taking place in the Belgian Congo, Marlow tells a tale about one of his adventures while working for a trading company. For ten points name this work by Joseph Conrad which was the basis for Apocalypse Now.

ANSWER—(Heart of Darkness)

4.

BONUS LITERATURE

Answer the following miscellaneous questions about Sherlock Holmes.

1. Name the author who created Sherlock Holmes.
2. The greatest story in which Holmes appeared is generally considered to be about this family whose members were cursed to be killed by a hound from hell because their ancestor Hugo had attacked a young woman who was fleeing through the moors.
3. After the death of the author, 41 Upper Baker Street was renumbered and given this address where Holmes and Watson lived.
4. Another of the well known stories in which Holmes appeared, in this case Holmes had to obtain a photo which was in the possession of Irene Adler because its publication would result in an embarrassment for Wilhelm von Ormstein, the King of Bohemia.

ANSWER—1. (Sir Arthur Conan Doyle) 2. (Baskervilles) 3. (221B Baker Street)
4. (A Scandal in Bohemia)

5.

TOSS-UP MATH

What is the simplest factored form of the polynomial $2X^3 - 4X^2 - 6X$?

ANSWER—($2X$ times the quantity X plus 1 times the quantity X minus 3)

5.

BONUS MATH

Find the functions which are the inverse of the following functions.

1. Y equals $1/X$.
2. Y equals $3X$ minus 2.
3. Y equal the square root of the quantity 1 minus X squared.
4. Y equals the cubed root of the quantity X minus 4.

ANSWER—1. (Y equals $1/X$) 2. (Y equals the quantity X plus 2, quantity divided by 3)
3. (No Inverse Exists) 4. (Y equals X cubed plus 4)

6.

TOSS-UP MISCELLANEOUS

Some practitioners of this hobby have begun using graph theory to analyze the crease patterns that yield the different shapes. Founded in tenth century Japan, it is still practiced as a hobby and used as a teaching aid for children. For ten points name this art of making models of animals, especially cranes, by folding sheets of paper.

ANSWER—(Origami)

6.

BONUS MISCELLANEOUS

Identify the following Christian religious holidays from a description.

1. Sometimes known as Quadragesima which also refers to the first Sunday during this period, this is the period before Easter which celebrates Christ's 40 days of fasting in the wilderness.
2. Known as Theophany in the Eastern Orthodox church, this holiday which occurs on January 6 commemorates the visit of the three wise men to the baby Jesus.
3. Also known as Whitsunday, this holiday occurs seven weeks after Easter Sunday and commemorates when the Holy Spirit came to the apostles and enabled them to speak in tongues.
4. Occurring three days before Easter, the English monarch celebrates this holiday by handing out money to one random man and woman for each year of the monarch's age.

ANSWER—1.(Lent) 2.(Epiphany) 3.(Pentecost) 4.(Maundy Thursday)

7.

TOSS-UP SOCIAL STUDIES

After hearing news of this Battle, General Washington remarked "The country is safe". In it General Howe lost over 1000 men, twice that of the Americans. Actually it was a strategic American defeat since the American troops ran out of gunpowder and were forced to defend their positions with bayonets. For ten points name this battle which was actually fought on Breed's Hill, not its namesake.

ANSWER—(Battle of Bunker Hill) Accept Breed's Hill on early buzz)

7.

BONUS SOCIAL STUDIES

Identify the following 19th century US Presidents from a description.

1. He had the most children by one woman, and was the first accidental president.
2. This president has the distinction of giving his vice-presidential inaugural address while being inebriated and being President during the purchase of Alaska.
3. The governor of Ohio when he was elected, he was considered a "Gentleman in Politics" and took the first effective steps toward civil service reform.
4. President during the era of good feelings and the acquisition of Florida, he was the only President besides Adams and Jefferson to die on the 4th of July.

ANSWER—1.(John Tyler) 2.(Andrew Johnson) 3.(Rutherford Hayes) 4.(James Monroe)

8.

TOSS-UP MATH

What is the definite integral of the function F of X equals $6X$ squared minus $12X$ from 0 to 4?

ANSWER—(32)

8.

BONUS MATH

Find the limits of the following.

1. The limit of the function F of X equals $3X$ cubed plus $2X$ squared plus X plus 1 as X approaches 2.
2. The limit of the function F of X equals the quantity $5X$ cubed minus $4X$ squared minus $6X$ quantity closed divided by the quantity $17X$ cubed minus $12X$ squared plus $9X$, as X approaches infinity.
3. The limit of the function F of X equals the quantity X squared plus X minus 12, quantity closed divided by the quantity X squared minus $3X$ minus 28, as X approaches negative 4.
4. The limit of the function F of X equals the quantity $6X$ squared minus $11X$ plus 3 quantity closed divided by the quantity $10X$ squared minus $19X$ plus 6, as X approaches $3/2$.

ANSWER—1.(35) 2.(5/17) 3.(7/11) 4.(7/11)

9.

TOSS-UP SCIENCE

They all have embryos in which there are three primary germ layers from which all specialized tissues develop. They are bilaterally symmetrical with anterior and posterior differentiation, have a true coelom and a digestive tract which begins with a mouth and ends with an anus. For ten points name these organisms or the phylum to which they belong, which all have a notochord and pharyngeal gill slits present at some times during their life cycle.

ANSWER—(Chordata or Chordates)

9.

BONUS SCIENCE

Answer the following questions relating to lichen.

1. & 2. Lichen are a close association of what two types of organisms.
3. Lichens are what type of organisms, which enter an area first when there is little or no vegetation already present.
4. What type of relationship do the organisms in lichen exhibit.

ANSWER—1 + 2.(Fungi & algae or blue-green bacteria) 3.(Pioneers)
4.(Controlled parasitism)

10.

TOSS-UP LITERATURE

His idiosyncrasies were dramatized by Gilbert and Sullivan in their play Patience. This author was known as a leader of the 'Art for Art's Sake' movement before he was imprisoned for homosexuality. His plays show the bitterness he felt after he was released from prison. For ten points name this author of Lady Windermere's Fan and The Importance of Being Earnest.

ANSWER—(Oscar Wilde)

10.

BONUS LITERATURE

Identify the following about The Adventure of Tom Sawyer.

1. Name the author of the work.
2. Name Tom's sweetheart.
3. Name the person falsely accused of murder.
4. Name the person who actually commits the murder.

ANSWER—1.(Mark Twain or Samuel Clemens) 2.(Becky Thatcher) 3.(Muff Potter)
4.(Injun Joe)

Half-Time

11.

TOSS-UP SCIENCE

The least reactive of all metals towards gases and liquids and one of the most common ones to be found free in nature, one ounce of it can be pounded into a 300-square foot sheet. For ten points name this soft, yellow metal with atomic number 79 and symbol Au.

ANSWER—(Gold)

11.

BONUS SCIENCE

Identify some of the possible products resulting from the nuclear fission of uranium.

1. Allowing the reaction to be self-sustaining, these neutral particles are one of the products produced. When they are released they can impact with another atom and split that nucleus.
2. Another of the release products is this highest energy type of electromagnetic wave.
3. One of the most common daughter elements that is produced is this one, number 43, which was the first artificial element to be produced.
4. Another common element that is produced is this group II metal which has atomic number 56 and symbol Ba.

ANSWER—1.(Neutron) 2.(Gamma rays) 3.(Technetium) 4.(Barium)

12.

TOSS-UP FINE ARTS

A very loose group of artists, this association's works which appeared in 1905 so shocked the establishment, that critic Louis Vauxcelles coined the name by which we know them today. Characterized by flat patterns and a free bold handling of color, important practitioners of it included Vlaminck, Derain and Rouault. For ten points name this group whose name means "wild beats" and whose most well known member was Henri Matisse.

ANSWER—(Fauvism or Les Fauves)

12.

BONUS FINE ARTS

In 1506 it occurred to the Pope at the time to tear down the 1100 year-old Constantinian Basilica of Saint Peter's and replace it with a Renaissance church. Answer the following questions related to that event.

1. What was the name of the Pope who decided to take on this undertaking.
2. What was the name of the High Renaissance architect who the pope gave the commission to and whose design basically consisted of a Greek cross with four equal arms terminating in apses.
3. The pope in question one died in 1513 and the architect in question two died in 1514, so the project went unrealized until 1546, when what other famous architect took on the project with out salary and simplified the design.

ANSWER—1.(Julius II) 2.(Donato Bramante) 3.(Michelangelo Bounarroti)

13.

TOSS-UP LITERATURE

Known as a satirist who uses the pen to expose corruption, this 20th century author is famous for his essays Rocking the Boat and Matters of Fact and Fiction, as well as his novels that probe the lives of historical figures. For ten points name this author of Lincoln: A Novel, Burr and Myra Breckenridge.

ANSWER—(Gore Vidal)

13.

BONUS LITERATURE

Given the title, name the author.

1. Lost Horizon.

2. Lonesome Dove.

3. Pale Fire.

4. The First Circle.

ANSWER—1.(James Hilton) 2.(Larry McMurtry) 3.(Vladimir Nabokov)

4.(Aleksandr Solzhenitsyn)

14.

TOSS-UP MATH

If a plane intersects a sphere in plane geometry, then it can only form two different quantities, name them.

ANSWER—(Circle & point)

14.

BONUS MATH

Identify the mathematician who was responsible for the following.

1. He wrote the first textbook on geometry, the Elements, which was used for thousands of years.

2. This man was responsible for the introduction of the common logarithm.

3. A founder of analytical geometry, this man is most well known for his last theorem which was eventually proven by Andrew Wiles.

4. In 1899 this man published Foundations of Geometry, but he is most well known for a series of 23 unsolved problems which he considered to be the most important challenges for mathematicians of the 20th century. Many remain unsolved.

ANSWER—1.(Euclid) 2.(Henry Briggs) 3.(Pierre Fermat) 4.(David Hilbert)

15.

TOSS-UP SOCIAL STUDIES

Legend says that this country was never colonized by Europeans because King Rama IV predicted a solar eclipse and then led the British and French ambassadors into the jungle to witness it and they agreed to leave his land alone. For ten points name this land which is now a Asian country with its capital at Bangkok.

ANSWER—(Siam or Thailand)

15.

BONUS SOCIAL STUDIES

Identify the following islands of Japan.

1. The largest of the Japanese islands, the highest peak on this seventh largest island in the world is Mount Fuji.

2. Formerly known as Yezo, this northernmost of the main Japanese islands is home to the cities of Hakodate and Sapporo.

3. The southernmost and most densely populated of the four main islands, on this island can be found Nagasaki.

4. The largest member of the southern Ryukyu islands, this famous island captured by the US Marines in WWII is now the base for the majority of US troops in Japan.

ANSWER—1.(Honshu) 2.(Hokkaido) 3.(Kyushu) 4.(Okinawa-Jima)

16.

TOSS-UP MISCELLANEOUS

Played in the Superdome, it saw the losing team score the quickest lead in Super Bowl history when Tony Franklin kicked a field goal 1:36 into the game. That first score was the only drama this game saw as the defense led by Richard Dent held the New England Patriots to negative 19 yards. For ten points identify this Super Bowl, the last one in which the Bears played.

ANSWER—(Super Bowl XX)

16.

BONUS MISCELLANEOUS

Mike Tyson has fought three opponents since getting out of prison.

1, 2 and 3. Name the three opponents.

4. Which organization's title did he win in his last fight.

ANSWER—1, 2 and 3.(Peter McNeeley, Buster Mathis Jr. and Frank Bruno) 4.(WBC)

17.

TOSS-UP SOCIAL STUDIES

A few members still survive and now sacrifice the blood of chickens rather than that of the royal family. The faith of this kingdom was based on the bloodletting of the king and when the crops failed and wars were lost, the king was blamed and the civilization fell. For ten points name this Central American culture which lasted from 250 to 900 AD.

ANSWER—(Mayas)

17.

BONUS SOCIAL STUDIES

Identify the following explorers from a description.

1. After his idea was rejected by King John of Portugal, the Spanish monarchy sent him on his way and agreed to name him the Viceroy of all new lands he found, Admiral of the Ocean Sea and give him ten percent of the profits from that land.

2. What we know of his life, such as that his grandfather was exiled from Norway and that his father was exiled from Iceland, comes from two sagas, the Greenlander's and Eric's.

3. The illegitimate son of a Spanish nobleman, he spent several years in the army driving the Moors out of Spain before journeying to the New World where he discovered and named Florida and became Governor of Puerto Rico.

4. On his first voyage aboard the Endeavour for the Royal Society, he sailed to Tahiti to observe a transit of Venus. On this Englishman's third voyage he was sent to search for the Northwest Passage but was killed in the Hawaiian islands.

**ANSWER—1.(Christopher Columbus) 2.(Leif Ericsson) 3.(Don Juan Ponce de Leon)
4.(James Cook)**

18.

TOSS-UP LITERATURE

Thomas Jefferson said that her poetry was "below the dignity of criticism", but she was praised by George Washington and lauded in London. She came to America in 1761 after being purchased by a Boston merchant. For ten points name this African American poet famous for An Elegiac Poem on the Death of the Celebrated Divine George Whitefield.

ANSWER—(Phyllis Wheatley)

18.

BONUS LITERATURE

Identify the following about the poetry of Shakespeare.

1. This Shakespearean sonnet contains the line "Shall I compare thee to a summer's day?"
2. This poem praises love using two birds, both of which are mentioned in the title.
3. This poem tells of the assault of a Roman woman by Tarquin.
4. This poem tells of a Roman goddess and her love of a mortal.

ANSWER—1. (Sonnet 18) 2. (The Phoenix and the Turtle) 3. (The Rape of Lucrece)
4. (Venus and Adonis)

19.

TOSS-UP MATH

Given a right triangle with angles A, B, and C with right angle at C, if the tangent of angle A is 5/12, then what is the cosecant of angle B?

ANSWER—(13/12)

19.

BONUS MATH

Give the solutions to the following linear systems of equations as a point.

1. Y equals X plus 4 and Y equals 2X plus 4.
2. 5X plus 3Y equals negative 2 and X minus 2Y equals negative 3.
3. 3X minus 2Y equals 1 and 6X minus 4Y equals 5.
4. 2X minus 5Y equals 5 and 4X plus 3Y equals 23.

ANSWER—1. (0, 4) 2. (Negative 1, 1) 3. (No solution) 4. (5, 1)

20.

TOSS-UP SCIENCE

They obey Sporer's law which says that in the beginning of their cycle they appear at latitudes between 30 and 40 degrees and if you graph their latitude of appearance versus time, you will obtain a butterfly diagram. For ten points name these black, cool objects which appear on the sun.

ANSWER—(Sunspots)

20.

BONUS SCIENCE

Identify the following constants from a description.

1. Defined as the universal gas constant divided by Boltzmann's constant, this constant which is equal to 6.022×10^{23} is the number of atoms in one mole of a substance.
2. Used to calculate the electrical charge between two point sources, this constant is equal to 1 over four pi epsilon naught or 9×10^9 Newton-meters squared per coulomb squared.
3. Equal to the ratio of the Kelvin to the Joule, this constant which is symbolized k_B is equal to 1.38×10^{-23} Joules/per degree Kelvin.
4. Named after a famous English scientist, this is the charge associated with one mole of electrons and is equal to 96,485 coulombs.

ANSWER—1. (Avogadro's number) 2. (Coulomb constant) 3. (Boltzmann's) 4. (Faraday)

Replacement Questions

TOSS-UP MATH

What is the exact value of the tangent of 240 degrees.

ANSWER—(Square root of 3)

BONUS MATH

Name the five smallest prime numbers greater than 600.

ANSWER—(601, 607, 613, 617 & 619)

TOSS-UP LITERATURE

He served in the Nazi army during WWII where he was wounded and held as a POW until 1946. After his release he worked as a laborer and a drummer in a jazz band before becoming a successful writer. He wrote Local Anesthetic and The Rat, but he is best known for his Danzig trilogy. For ten points name this author whose trilogy contains the work The Tin Drum.

ANSWER—(Gunter Grass)

BONUS LITERATURE

Given a title, name the author.

1. The Emperor's New Clothes.
3. Siddhartha.

2. The Imaginary Invalid.

4. The Counterfeiters.

ANSWER—1.(Hans C. Andersen) 2.(Moliere) 3.(Herman Hesse) 4.(Andre Gide)

TOSS-UP SOCIAL STUDIES

Designed by Anthemius of Tralles and Isidore of Miletus for Roman Emperor Justinian I in the 530's AD, when the Turks captured Constantinople they converted this building into a mosque. For ten points name this building in Istanbul which is also known as the Santa Sophia.

ANSWER—(Hagia Sophia)

BONUS SOCIAL STUDIES

Given a list of states, name the state that borders every state on the list.

1. Massachusetts, Rhode Island, and New York.
2. Idaho, Wyoming, North and South Dakota.
3. Michigan, Indiana, Kentucky, West Virginia and Pennsylvania.
4. New Hampshire, Maryland and New York.

ANSWER—1.(Connecticut) 2.(Montana) 3.(Ohio) 4.(Vermont)

TOSS-UP SCIENCE

The picture of this type of bond was first proposed by Walter Kossel in 1916, and it accounts for the chemistry of many inorganic compounds. For ten points name this type of bond in which atoms are held together by the electrostatic attraction between two unlike charges.

ANSWER—(Ionic bond)

BONUS SCIENCE

Name the three classes which are contained in the phylum Platyhelminthes.

ANSWER—(Turbellaria, Trematoda & Cestoda)