## G.A.T.A. 1993 State Tournament - Round 9

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T1. Union County, South Carolina; Berkeley County, Virginia; Augusta County, Virginia; York County, Pennsylvania; England; Ireland; and a ship at sea are all possible birthplaces for this president, whose official birthplace is listed as Waxhaw, South Carolina. For 10 points, name the president, famous for his "kitchen cabinet."

Answer: Andrew Jackson
B1. Give the losing candidate for the following parties in the stated Presidential elections for 5 points each.

1. Democratic, 1872

Answer: Horace Greeley
2. Free Soil, 1848

Answer: Martin Van Buren
3. Constitutional Union, 1860

Answer: John Bell
4. Republican, 1884

Answer: James G. Blaine
T2. Pencil and paper ready. Given that the natural $\log$ of 16 is 2.8 , for 10 points, what is the natural $\log$ of 4 ?

Answer: 1.4
B2. Give the period in terms of pi of the following trigonometric functions for 5 points each.

1. $\sin (2 x) \quad$ Answer: pi
2. $\tan (x)$

Answer: pi
3. $\cos (3 x+p i)$

Answer: 2 pi over three or two-thirds pi
4. cosecant(x)

Answer: 2pi
T3. Though the same symbols can be used at the beginning of a musical piece, generally this term is only applied if they are used on one note. For 10 points, what are these symbols that include naturals, sharps, and flats?

Answer: accidentals
B3. Identify the Puccini operas featuring the following characters for 10 points each.

1. Lt. Pinkerton

Answer: Madame Butterfly
2. Mimi

Answer: La Boheme

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T4. Their highest peak is Toubkal at 13,665 feet and they run along the northwest shoreline of Africa, stretching from Algeria to the Moroccan Western Sahara. For ten points, name this mythologically named mountain range.

Answer: Atlas Mountains
B4. Answer the following questions about Australian geography.

1. For 10 points, within the boundaries of what state is the Capital Territory containing Canberra?

Answer: New South Wales
2. For an additional 10 points, off the coast of which Australian state lies the Great Barrier Reef?

Answer: Queensland
T5. After his wife's death, he underwent a spiritual crisis, resigned his pulpit and went to Europe where he met William Wordsworth and Thomas Carlyle. He returned to the U.S. in 1833 and four years later delivered the famous address, "The American Scholar". For 10 points, identify this transcendentalist.

Answer: Ralph Waldo Emerson
B5. For 5 points each, identify these characters from the Sound and the Fury.

1. She was the Compson's maid
2. His roommate was Shreve McCannon
3. She married Sydney Herbert Head

Answer: Dilsey
Answer: Quentin Compson

Answer: Candace or Caddy Compson
4. Caddy's husband promised this brother a job in a bank Answer: Jason Compson

T6. Yellowstone National Park is shared by Idaho, Wyoming, and Montana, but for 10 points, what other National Park is shared by North Carolina and Tennessee? Answer: Great Smoky Mountains National Park

B6. Identify these west European rivers for 10 points each.

1. It is the longest river in France

Answer: Loire
2. It is the longest river entirely within Spain

Answer: Ebro
T7. Its exocrine area consists of a small number of acinar cells that secrete digestive enzymes to the small intestine. Its endocrine portion secretes hormones directly into the blood. For 10 points, identify this gland, the source of the hormones glucagon and insulin.

Answer: pancreas
B7. Give the phylum of the following creatures for 10 points each.

1. sponges

Answer: porifera

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2. segmented worms

Answer: annelida or annelids

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T8. His successful novels include Thais, Le Livre De Mon Ami, and Histoire Comtemporaine. For 10 points, who is this winner of the 1921 Nobel Prize for literature whose best known work is Penguin Island?

Answer: Anatole France
B8. Identify these Latin American authors for 10 points each.

1. This Colombian author's works include The General in His Labyrinth and Love in the Time of Cholera.

Answer: Gabriel Garcia-Marquez
2. This Argentinian author wrote The Book of Sand, The Garden of Forking Paths, and The Seven Nights.

Answer: Jorge Luis Borges
T9. In mathematics, this term can be followed by the words root, numbers, and matrix. It can be preceded by the words perfect and magic. For 10 points, what is this term that is applied to a rectangle with two equal adjacent sides?

Answer: square
B9. Given the following matrix:
Row 1: 3, 5
Row 2: 2, 4
For 10 points, what is the determinant?
Answer: $\underline{2}$
For 10 points, what is the trace of the matrix?
Answer: 7
T10. He spent the majority of the last twenty years of his life serving at least eight different prison sentences. It was while in prison that he wrote his famous series of eight romances. Name this 15th century English writer whose work was collected by William Caxton in 1485 and published as Le Morte D'Arthur.

Answer: Sir Thomas Malory
B10.For 5 points each, identify the 19th century British women who wrote the following.

1. Agnes Grey

Answer: Anne Bronte
2. Adam Bede

Answer: George Eliot
3. The Goblin Market

Answer: Christina Rossetti
4. Mansfield Park

Answer: Jane Austen

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T11. Born in 1824 in Konigsberg, he established that the Fraunhofer lines in the solar spectrum are indications of the chemical composition of the solar atmosphere. He calculated the velocity of propagation of electrical disturbances along a wire before dying in 1887. For ten points, who was this coworker of Robert Bunsen?

Answer: Gustav Kirchhoff
B11. Identify the following devices from physics for 10 points each.

1. It is a particle accelerator that transfers a charge from an electron source to an insulated sphere by means of a moving belt composed of an insulating material.

Answer: Van de Graaff generator
2. A device used for accelerating charged atomic particles by means of D-shaped electrodes, it was invented by Ernest Orlando Lawrence.

Answer: cyclotron
T12. It is derived from the Latin word for a rush, a marsh plant whose stems and leaves are useful for making baskets and mats. In Middle English, it referred to cream cheese and later came to refer to a feast. For 10 points, identify this word that today is usually used to refer to trips by public officials, such as Congressmen, at the expense of the taxpayers.

Answer: junket
B12. For 10 points each, translate the following sentences into English.[Reader, please spell out question]

1. Yo tengo un perro. (Spanish) Answer: I have a dog
2. Je vois le livre. (French) Answer: I see the book

T13. A person in this state will have brain activity that somewhat resembles that of a waking person, but will have completely relaxed muscles. It usually occurs about 90 minutes after falling asleep and only lasts about 5 or 10 minutes. For 10 points, what is this phase of sleep?

Answer: R.E.M. or rapid eye movement
B13. Identify the following pupils of Sigmund Freud for 10 points each.

1. He coined the term "inferiority complex"

Answer: Alfred Adler
2. He coined the term "collective unconscious"

Answer: Carl Jung
T14. It is defined as energy plus the product of pressure and volume and is represented by the symbol H . For 10 points, what is this thermodynamic quantity?

Answer: Enthalpy (not entropy)
B14. For 10 points each, what type of radical is attached to a benzene ring to form the following compounds?

1. phenol

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Answer: $\underline{\mathrm{OH}}$ or hydroxyl group or alcohol group
2. toluene

Answer: methyl or CH 3

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T15. He illustrated a book of Mallarme's poetry and did etching and sculpture, but he is best known for his paintings which derive expression from the use of color. "Open Window," "Joy of Life," and "Dance" are a few of his better known works. For 10 points, identify this early 20th century painter, usually considered the leader of the Fauves.

Answer: Henri Matisse
B15. Identify the early American artists who painted the following historical scenes for 10 points each.

1. The Signing of the Declaration of Independence

Answer: John Trumbull
2. The Death of General Wolfe

Answer: Benjamin West
T16. You may know that Douglas Adams' recent book Mostly Harmless discusses the existence of Rupert, the tenth planet of the solar system. If such a planet existed, it should be about 154 astronomical units from the sun according to this mathematical relationship, discovered independently by two German scientists. For ten points, what is this law which produces an approximate series of the relative distances of the first seven planets from the sun?

Answer: Titius-Bode's Law
B16. The year 46 B.C. was made 445 days long to correct for errors in the previous Roman calendar.

1. For 10 points, who instituted this reform?

Answer: Julius Caesar
2. For 10 points, exactly how long was the year established to be by the Julian Calendar?

Answer: 365 1/4 days (or, 365 days, 6 hours)
T17. His collections of short stories include The Magic Barrel, Idiots First, and Rembrandt's Hat. But he is better known for his novels such as God's Grace, The Tenants, and The Assistant. For 10 points, identify this American author of The Natural.

Answer: Bernard Malamud
B17. For 5 points each, give the main title and author of the American novels with the following subtitles.

1. "a Girl of the Streets"

Answer: Maggie, Stephen Crane
2. "a Peep at Polynesian Life"

Answer: Typee, Herman Melville

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T18. His doctoral dissertation at the University of Helmstadt was a proof of the Fundamental Theorem of Algebra. He used his method of least squares to track the orbit of the newly discovered asteroid Ceres. For ten points, name this mathematical genius who amazed his grade school teacher by easily adding up the numbers from 1 to 100.

Answer: Karl Gauss
B18. Identify the following terms from mathematics for 10 points each.

1. This branch of mathematics is the study of the properties of surfaces that remain unchanged even when the surface is distorted.

Answer: topology
2. It is a term applied to some special process of solving a certain type of problem, particularly a method that continually repeats some basic process. The term is widely used in computer science.

Answer: algorithm
T19. This revolutionary earned his nickname because he was able to find openings in enemy lines. After Napoleon came to power, this man was imprisoned and died in 1803. His real name was Pierre Dominique Breda. Who is this opponent of slavery, better known as leader of a revolt in Haiti?

## Answer: Toussaint L'Overture

B19. Identify the following Athenian figures for 10 pts each.

1. This Athenian leader secured the ostracism of Cimon. He arranged a truce with Sparta in 445 B.C.

Answer: Pericles
2. In 415 B.C. this Athenian was falsely charged with defacing the city's statues of Hermes and fled to Sparta. He later betrayed Sparta and returned to Athens.

Answer: Alcibiades
T20. The vein carries oxygenated blood to the heart, while the artery carries deoxygenated blood from the heart to the lungs. For 10 points, what is this word that in general refers to the lungs?

Answer: pulmonary
B20. Identify these biological terms that start with "A" for 5 points each.

1. It is the name applied to the first vertebra of tetrapods.

Answer: atlas
2. This term is applied to the loss of tissue or the diminishing in size of an organ.

Answer: atrophy
3. It is a synonym for atrium.

Answer: auricle
4. It is a plant hormone produced by active regions of cell division.

Answer: auxin

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T21. All of them consist of three basic layers that vary in thickness and composition depending on where they are located in the body. For 10 points, identify these tubes comprised of both muscle and connective tissue that carry blood away from the heart to body cells.

Answer: arteries
T22. It tells the story of the wager of an English gentleman with the members of the Reformers' Club. In it, the central character is tracked by Detective Fix and accompanied by his valet, Passepartout. For 10 points, identify this 1873 novel that tells of Phileas Fogg's successful circumnavigation of the globe.

Answer: Around the World in Eighty Days

