

G.A.T.A. 1993 State Tournament - Round 3

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T1. After the death of General Edward Braddock, this man became commanding officers of all Virginia forces in the French and Indian War. For ten points, name this man, to whom Cornwallis surrendered in 1781.

Answer: George Washington

B1. All the Mercury astronauts named their capsules with a word followed by a 7. Two of them chose names beginning with "F". For 10 points each, I'll give you a Mercury capsule name, you tell me the astronaut that flew in it.

1. Freedom 7

Answer: Alan Shepard

2. Friendship 7

Answer: John Glenn

T2. Pencil and paper ready. For 10 points, what is the derivative with respect to x of sine squared x?

Answer: 2 sine x cosine x

B2. Given the points (1,1) and (-1,2) answer the following questions for 10 points each.

1. What is the slope of the line connecting them?

Answer: -1/2 (minus one half)

2. What is the x-intercept of the line passing through both points?

Answer: 3

T3. This nation consists of two islands which are separated by the Cook Strait. For ten points, name this country which contains the city of Auckland and has its capital at Wellington.

Answer: New Zealand

B3. Identify the only European nation bordered by the following pairs of countries. 5 pts. each.

1. Andorra, Belgium

Answer: France

2. Slovakia, Romania

Answer: Hungary

3. Denmark, Belgium

Answer: Germany

4. Hungary, Switzerland

Answer: Austria

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T4. Sweet Thursday, The Wayward Bus, The Winter of Our Discontent, Tortilla Flat, In Dubious Battle, The Pearl and East of Eden are, for ten points, works of what American author?

Answer: John Steinbeck

B4. Identify the following "Tales" from American literature for 10 points each.

1. It is the title given to Poe's first short story collection.

Answer: Tales of the Grotesque and Arabesque

2. It is the 1947 collection of short stories for which James Michener was awarded the 1948 Pulitzer Prize in fiction.

Answer: Tales of the South Pacific

T5. They are members of the weasel family and constitute the genus Taxidea. They are nocturnal and dig underground homes. For ten points, name these fiesty, burrowing animals whose name can mean "to treat cruelly."

Answer: Badgers

B5. Answer the following questions about the digestive system. 10 pts. each.

1. First, what name is given to the opening that connects the esophagus to the stomach?

Answer: cardiac orifice

2. What is the name of the sphincter muscle that controls the opening of the stomach to the small intestine?

Answer: pyloric sphincter

T6. They stretch from the Arctic coastline of Russia to the Kirgiz steppe in Kazakhstan. For ten points, name these mountains which are considered the boundary between Asia and Europe.

Answer: Ural Mountains

B6. Identify the following geographical features of South America for 5 points each.

1. This region derives its name from the Quechua word for plain and is a vast savanna in southern South America extending from the Atlantic Coast to the Andes.

Answer: Pampas

2. This arid region is located in northern Chile and extends about 600 miles south from the Peruvian border.

Answer: Atacama desert

3. This region in Argentina, Bolivia and Paraguay was the subject of a 1932-35 war.

Answer: Chaco or Gran Chaco

4. This archipelago is split between Chile and Argentina and is only sparsely inhabited.

Answer: Tierra del Fuego

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T7. One celebrated the completion of the Trans-Siberian Railway, complete with a working miniature train. Another held a perfect replica of the coach used at the coronation of Czar Nicholas II. For 10 points, give the common of these ovate works of art.

Answer: Fabergé Eggs

B7. Name the painters of these 18th century art works. 5 pts. each.

1. The Death of Marat

Answer: Jacques Louis David

2. Paul Revere

Answer: John Singleton Copley

3. The Swing

Answer: Jean Honore Fragonard

4. The Rake's Progress

Answer: William Hogarth

T8. Pencil and paper ready. For 10 points, what is the definite integral from zero to 4 of quantity x plus 3 dx ?

Answer: 20

B8. Evaluate the following definite integrals for 10 points each.

1. Integral from e to e squared of 1 over x dx .

Answer: 1

2. Integral from minus π to π of sine of x dx .

Answer: zero

T9. "I should have been a pair of ragged claws scuttling across the floors of silent seas." For ten points, in what poem by T. S. Eliot is this line found?

Answer: The Love Song of J. Alfred Prufrock

B9. Identify the Shakespeare play from which the following lines are taken. 5 pts. each.

1. "So fair and foul a day I have not seen"

Answer: Macbeth

2. "Lord, what fools these mortals be!"

Answer: Midsummer Night's Dream

3. "All the world's a stage/And all the men and women merely players"

Answer: As You Like It

4. "O brave new world, That has such people in't"

Answer: The Tempest

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T10. When irreversible, they are characterized by an increase in entropy; when reversible, there is no change in entropy, and they can never decrease entropy. For 10 points, give this term describing a thermo-dynamic process where heat is neither added nor allowed to leave a system.

Answer: adiabatic process

B10. For 10 points each, what physics terms or quantities are defined by the following:

1. the product of tangential force and distance from the pivot point

Answer: torque

2. $m v^2$ over r , that is the mass of an object times the square of its linear velocity divided by the radius of its path of circular motion

Answer: centripetal force

T11. This word first came into European languages as a result of Captain James Cook's third voyage. From observing Polynesian customs, Cook discerned the word's meaning as "consecrated" and "not to be touched." For 10 points, what is this term which denotes anything forbidden?

Answer: taboo

B11. Given an English translation, give the Latin phrases that begin with the word "Ad" for 10 points each.

1. to the point of being disgusting

Answer: ad nauseam

2. without end

Answer: ad infinitum

T12. Pencil and paper ready. For 10 points, what is the radius of a sphere with volume 256π over 3?

Answer: 4

B12. You have an ellipse centered on the origin of a cartesian plane. It intersects the x-axis at 4 and -4 and intersects the y-axis at 2 and -2. For 10 points each:

1. What is the standard form of the equation for this ellipse?

Answer: $x^2/16 + y^2/4 = 1$

2. What is the area of the ellipse?

Answer: 8 pi

T13. The most common of the psychoses, it was first named as a single disorder in 1896 as "dementia praecox" but was renamed by Emil Kraepelin to the term used today. For 10 points, what is this form of psychosis whose symptoms include hallucinations, delusions, thought disorders, and the loss of boundary between self and non-self.

Answer: schizophrenia

B13. For 10 points each, identify the schools of psychology associated with the following psychologists.

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1. John B. Watson, B.F. Skinner
Answer: Behaviorism
2. Max Wertheimer, Wolfgang Kohler
Answer: Gestalt

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T14. In 1778, Karl Scheele isolated a compound of this element that derives its name from the Greek for "lead". For 10 points, what is this silvery-white element of the second transition series that has atomic number 42 and symbol Mo?

Answer: molybdenum

B14. Identify the following types of chemical bonds for 10 points each.

1. It is the type of covalent bond that attaches the hydrogens in methane to the central carbon.

Answer: sigma [do not accept single bond]

2. It is the bond between the carbonyl group of one amino acid and the nitrogen of the next amino acid in a chain.

Answer: peptide bond

T15. She told the story of Alexandra Bergson, a Nebraska woman, in her 1913 novel O Pioneers! For ten points, name this American author of The Song of the Lark and My Antonia.

Answer: Willa Cather

B15. There are a great many trilogies written these days, but that is not a new trend. I will name a trilogy by an American author,;for 5 points each, name any two books in the trilogy.

1. Frank Norris, Epic of the Wheat

Answer: The Pit, The Octopus, The Wolf (unfinished)

2. John Dos Passos, USA

Answer: 1919, 42nd Parallel, The Big Money

T16. Coleoptera is a very large order of insects with horny forewings covering the rear portion of the body. All members of this order have a more common name, however. For 10 points, identify this order of insects that includes the boll weevil, the firefly, the June Bug and the Dung.

Answer: beetle

B16. Identify the following terms from cell biology for 10 pts. each.

1. In plant cells, it is the layer external to the plasma membrane.

Answer: cell wall

2. This term is applied to any unicellular or multi-cellular organism whose cells contain DNA in a nucleus enclosed by a membrane.

Answer: eukaryote

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T17. The celebration of the 2,600th anniversary of the ascension to the throne of Japan's Emperor Jimmu coincided with the production of Mitsubishi's new model, the A6M. As a result, for 10 points, what numerical nickname was given to this World War II aircraft?

Answer: the Zero (for the zero year of Jimmu's reign)

B17. Identify the following events crucial in early western European history. 10 pts. each.

1. In 732 this battle halted the further Moorish expansion into Europe

Answer: Tours

2. In 843 this treaty divided the Kingdom of Charlemagne among his three grandsons

Answer: Treaty of Verdun

T18. When mild metamorphic processes act on low-grade coal, this type of higher-grade coal is produced. For ten points, name this high-grade, hard coal.

Answer: Anthracite

B18. Identify the following terms associated with glacial erosion for 10 points each.

1. They are long narrow, deep, and relatively straight arms of the ocean that may project many kilometers inland. The sea water invaded these areas following deglaciation.

Answer: fiord(s) or firths

2. These are deposits of rock debris picked up and transported by the moving ice of mountain glaciers and continental ice sheets. They are laid down during both the advance and retreat of the ice.

Answer: moraines

T19. His works include the symphonic poems, Don Juan and Also Sprach Zarathustra. For 10 points, identify this German composer of Elektra, Salome, and Der Rosenkavalier.

Answer: Richard Strauss

B19. For 10 points each, identify these Russian composers from their works.

1. Scheherazade and The Golden Cockerel

Answer: Nikolai Rimsky-Korsakov

2. Love for Three Oranges and War and Peace

Answer: Sergei Prokofiev

T20. This Greek playwright was a vicious satirist, attacking Socrates and mocking Euripides. For 10 points, identify this master of the Old Comedy who wrote the plays The Frogs and The Clouds.

Answer: Aristophanes

B20. Identify the ancient authors of the following works.

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| 1. The Georgics | Answer: <u>Virgil</u> |
| 2. Lives of the Caesars | Answer: <u>Suetonius</u> |
| 3. History of the Peloponnesian War | Answer: <u>Thucydides</u> |
| 4. History of the Persian Wars | Answer: <u>Herodotus</u> |

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T21. In 1858 an assassination attempt on him and his wife Eugenie killed 10 but left him and his wife unharmed. Ultimately, he was not undone by assassins but by Bismarck. For 10 points, identify this man whose government was replaced by the Third Republic following the disastrous Franco-Prussian War.

Answer: Napoleon III

T22. Written in 1908, it concerns a group of creatures who brave the Wild Wood and the terrors of Childhood. It is dominated by a creature who is fascinated with motor-cars and who is imprisoned in a medieval castle. For 10 points, identify this children's classic by Kenneth Graham that is centered on Toad.

Answer: The Wind in the Willows