

G.A.T.A. 1993 State Tournament - Round 14

Copyright 1993 - Independent Buzzer Association

T1. Pencil and paper ready. Consider two spheres, one with a radius of 6 inches and the other with a radius of 5 inches. For ten points, in terms of Pi, what is the difference in their surface areas?

Answer: 44 Pi square inches

B1. Give the binomial factors of the following. 10 points each.

1. $2x^2 + 11x + 5$

Answer: $(x + 5)(2x + 1)$

2. $2x^3 + 9x^2 - 6x - 5$

Answer: $(x + 5)(2x + 1)(x-1)$

NOTE: Order of binomials is arbitrary, accept any order for each parentheses

T2. It was established in 1935 as part of FDR's New Deal, and consists of four programs: Old Age and Survivor's Insurance, Disability Insurance, Hospital Insurance, and Supplemental Security Income. For ten points, name this federal program.

Answer: Social Security

B2. Answer the following questions about Bacon's Rebellion for 10 points each.

1. In what state did it occur?

Answer: Virginia

2. In what year did it occur?

Answer: 1676

T3. The name was given to it in 1825 by English geologist Adam Sedgewick who applied it to a sequence of sandstone and shale in northwestern Wales. It lasted from about 570 to 500 million years ago and its advent coincides with the first appearance of abundant fossils. For 10 points, identify this first period of the Paleozoic Era.

Answer: Cambrian

B3. For 10 points each, identify the constellation in which these stars are found.

1. Betelgeuse, Saiph, Rigel

Answer: Orion

2. Regulus, Zosma

Answer: Leo

G.A.T.A. 1993 State Tournament - Round 14

Copyright 1993 - Independent Buzzer Association

T4. She held power during the reign of her brother Caligula but was banished after plotting against him. Her uncle Claudius recalled her to Rome and married her in 49 A.D. Through her plotting, she convinced Claudius to pass over his son, Britannicus, to name her son, Nero, emperor. For 10 points, identify this mother of Nero who was put to death in 59 A.D. at the order of her son.

Answer: Agrippina the Younger or II

B4. Answer the following questions about the battle of Waterloo.

1. In what present day European nation was it fought?

Answer: Belgium

2. In what year was it fought?

Answer: 1815

3. What English general led the allied armies to victory?

Answer: Arthur Wellesley, Duke of Wellington

4. The tide of the battle turned when what Prussian commander's forces attacked Napoleon's right flank?

Answer: Gebhard von Blucher

T5. You know that Glacier Bay National Park is in Alaska, but for 10 points in what state would you find Glacier National Park?

Answer: Montana

B5. Answer the following questions about the tiny African nation of Togo.

1. For 5 points, what is its capital?

Answer: Lome

2. For 5 points each, name the three nations that border Togo.

Answer: Ghana, Burkina Faso, Benin

T6. In 1936, the Kaufmann family of Pittsburgh hired him to design a new home. It consisted of dramatic concrete cantilevers over a rocky waterfall in a wooded, rural site. For 10 points, identify the architect that Kaufmanns hired to design the now famous "Falling Water".

Answer: Frank Lloyd Wright

B6. Identify the ancient Greek sculptors of the following. 10 pts. each.

1. The Elgin Marbles

Answer: Phidias

2. The "Cnidian Aphrodite" and "Hermes with the Infant Dionysus"

Answer: Praxiteles

G.A.T.A. 1993 State Tournament - Round 14

Copyright 1993 - Independent Buzzer Association

T7. He was born into an old and wealthy family and falls in love with an "impossible" girl, Mary Monahan. He is sent on a sea voyage, returns home, marries, studies law and becomes a coupon clipper. For 10 points, identify this "late" title character of a Pulitzer Prize-winning novel by J.P. Marquand.

Answer: George Apley

B7. For 5 points each, give the author and title of the 20th century American novel that opens with these lines.

1. All this happened, more or less.

Answer: Slaughterhouse Five, Kurt Vonnegut

2. It was love at first sight.

Answer: Catch-22, Joseph Heller

T8. Pencil and paper ready. If two days of the week are selected at random, where the order in which they are selected is considered unimportant, for 10 points, how many possible choices are there?

Answer: 21

B8. You have a regular octagon. Extend any side of the octagon to form a line. For 10 points each:

1. What is the measure of the interior angles in the octagon? in degrees

Answer: 135 degrees

2. What is the measure of the angle between the line and the sides immediately adjacent to the side through which the line passes?

Answer: 27.5 or $55/2$ degrees

T9. Rienzi, Siegfried, Parsifal, Tannhauser, The Flying Dutchman, and Lohengrin are all, for ten points, operas by what 19th century German composer?

Answer: Richard Wagner

B9. Identify the following works by Johann Sebastian Bach for 10 points each.

1. It is a group of 6 "Concerti grossi" for various combinations written for a German margrave. Answer: Brandenburg Concertos

2. Bach took two of the Italian classic forms, one for two or more voices, the other for harpsichord, and combined them in this work in D-minor that is often heard in horror films.

Answer: Toccatina and Fugue in D-minor

G.A.T.A. 1993 State Tournament - Round 14

Copyright 1993 - Independent Buzzer Association

T10. He spends a great deal of his time complaining about his aching feet and making fun of Audrey's rustic swain William. Initially, he is in the service of Duke Frederick but he joins Rosalind and Celia when they flee to the Forest of Arden. For 10 points, identify this professional fool in Shakespeare's As You Like It.

Answer: Touchstone

B10. For 10 points each, identify the World War I British poet who wrote the following lines.

1. "If I should die, think only this of me/That there is some corner of a foreign field that is forever England..."

Answer: Rupert Brooke (The Soldier)

2. "Gas! Gas! Quick, boys! - An ecstasy of fumbling,/Fitting the clumsy helmets just in time"

Answer: Wilfred Owen (Dulce et decorum est)

T11. This 18th century Scottish economist gave the first full formulation of classical free-market economics. For ten points, name this author of The Theory of Moral Sentiments and The Wealth of Nations.

Answer: Adam Smith

B11. Identify the thinkers who wrote the following works. 5 pts each.

1. Critique of Pure Reason

Answer: Immanuel Kant

2. The City of God

Answer: St. Augustine

3. In Praise of Folly

Answer: Erasmus

4. The Philosophy of Right

Answer: Georg W.F. Hegel

T12. Prime Minister from 1874 to 1880, this founder of the British Conservative Party introduced the 1867 Reform Bill and vigorously supported Imperialism. For ten points, name this prime minister who was also a noted author.

Answer: Benjamin Disraeli

B12. Give the houses of the following British monarchs for 5 points each.

1. Mary I

Answer: Tudor

2. Richard II

Answer: Plantagenet

3. Edward IV

Answer: York

4. William IV

Answer: Hanover

G.A.T.A. 1993 State Tournament - Round 14

Copyright 1993 - Independent Buzzer Association

T13. This word originally meant "polished" or "smooth" but by the 18th century the associated notion of "neatness" had led on to "neatly concise". For 10 points, identify this word that now describes a short reply.

Answer: terse

B13. For 10 points each, give the Latin phrases for the following:

1. deductively, as in an argument in which one infers effects from known causes.

Answer: a priori

2. before the war

Answer: ante bellum

T14. Sometimes confused with ontology, which is the branch of philosophy concerned with being, this field is actually the branch of medicine concerned with tumors. For ten points, name it.

Answer: Oncology

B14. For 10 points apiece identify the mammalian order from a brief description.

1. This order consists of egg laying mammals of two families, represented by the spiny anteater and platypuses.

Answer: Monotremata or monotremes

2. Hoofed animals with an odd number of toes make up this order. In it can be found zebras, tapirs and rhinos.

Answer: Perissodactyla

T15. Introduced December 18, 1860, it consisted of several constitutional amendments such as permanent protection of slavery beneath the Missouri compromise line and enforcement of the fugitive slave law. For 10 points, what was this last ditch effort to avert civil war that was named for the Kentucky Senator who introduced it.

Answer: Crittenden Compromise

B15. Identify the president who appointed the following men Chief Justice of the Supreme Court. 5 pts. each.

1. Roger Taney

Answer: Andrew Jackson

2. William Howard Taft

Answer: Warren G. Harding

3. John Marshall

Answer: John Adams

4. Earl Warren

Answer: Dwight Eisenhower

G.A.T.A. 1993 State Tournament - Round 14

Copyright 1993 - Independent Buzzer Association

T16. This lustrous, silvery-blue hard metal is used as a catalyst and to make magnetic alloys, ceramics and paints. It was discovered in 1735 in Sweden by G. Brandt, and its name comes from the German word for "goblin". For 10 points, name this element with a relative atomic mass of 58.933, an atomic number of 27, and symbol "Co" on the periodic table.

Answer: cobalt

B16. Identify the following chemical laws for 10 pts each.

1. This law states that the rate of effusion of a gas is inversely proportional to the square root of its formula mass; this relationship is also true for the diffusion of gases.

Answer: Graham's law

2. This law states that when gases combine to give a gaseous product, the ratio of the volume of the reacting gases to that of the product is a simple integral ratio.

Answer: Gay-Lussac's law

T17. Emma Lazarus' novel Alide, it subtitled "An Episode..." in this man's life. Born into a middle-class family in Frankfurt-am-Main in 1749, he worked in law before becoming a writer. For 10 points, identify this man who achieved fame with "Goetz of Berlichingen" who is better known for his "Faust".

Answer: Johann Wolfgang von Goethe

B17. Identify the following Trojans, 10 pts each.

1. This Trojan priest attempted to warn his people against the Trojan horse, but went unheeded.

Answer: Laocoon

2. This daughter of Priam and Hecuba was the beloved of Apollo, who granted her the gift of prophecy. When she spurned him, he cursed her so that no one would believe her prophecies.

Answer: Cassandra

T18. Pencil and paper ready. For ten points, solve the following equation for x in radians, assuming that x lies between negative $\pi/2$ and $\pi/2$: $\tan(x) = -1$ (tangent x equals negative one).

Answer: $-\pi/4$ [negative pi over 4]

B18. Given the vectors $A=3i + 4j$ and $B=2i - 2j$:

1. For 10 points, what is their sum?

Answer: $5i + 2j$

2. For 10 points, what is their dot product?

Answer: -2 [negative two]

G.A.T.A. 1993 State Tournament - Round 14

Copyright 1993 - Independent Buzzer Association

T19. One of his last works was *The Crack-Up*, which described the mental illness of his wife. For 10 points, identify this author whose other works include "The Diamond as Big as the Ritz", and "The Last Tycoon".

Answer: F. Scott Fitzgerald

B19. Identify the female African-American authors of the following works. 5 pts each.

1. *The Temple of My Familiar*

Answer: Alice Walker

2. *Song of Solomon*

Answer: Toni Morrison

3. *A Raisin in the Sun*

Answer: Lorraine Hansberry

4. *Annie Allen*

Answer: Gwendolyn Brooks

T20. In 1939, two German physicists, Hahn and Strassman discovered that by bombarding uranium with low energy neutrons, particles could be obtained with a mass between that of the bombarded nucleus and the neutron. For 10 points, Hahn and Strassman had discovered what type of nuclear reaction?

Answer: fission [not fusion]

B20. Answer the following questions about temperature scales. 10 pts each.

1. What is the value given to absolute zero on the Celsius scale? Give answer to the nearest whole number

Answer: minus 273 C

2. What absolute temperature scale uses the same size degrees as the Fahrenheit scale?

Answer: Rankine

T21. This state contains the oldest Jewish temple in the U.S., the Touro Synagogue. For ten points, identify this state, named for a Greek island, the smallest in the U.S.

Answer: Rhode Island

T22. Harold II was defeated at this battle, thus completing the Norman conquest of England. For ten points, name this 1066 victory of William I.

Answer: The Battle of Hastings