

G.A.T.A. 1993 State Tournament - Round 7

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T1. "We, whose names are underwritten, the Loyal Subjects of our dread Sovereign Lord, King James," begins, for ten points, what famous document signed by William Brewster, William Bradford, Miles Standish and others upon their arrival in Cape Cod Harbor in 1620?

Answer: The Mayflower Compact

B1. Give the years of the following events in U.S. history for 5 points each.

1. Lincoln issues the Emancipation Proclamation

Answer: 1862

2. Treaty of Paris ending Revolutionary War

Answer: 1783

3. death of Zachary Taylor

Answer: 1850

4. Cuban Missile Crisis

Answer: 1962

T2. Pencil and paper ready. For 10 points, what is the probability that a couple with four children will have four daughters?

Answer: 1/16

B2. For 10 points each, compute the following probabilities.

1. The probability of rolling a 7 with two six sided dice.

Answer: 1/6 (accept 6/36)

2. In a sock drawer with 6 navy and 6 black socks, the probability of picking two socks of the same color on the first attempt.

Answer: 5/11

T3. By now, everyone has heard that William the Conqueror won the Battle of Hastings in 1066. But for 10 points, identify the loser of that battle.

Answer: Harold II or Harold Godwinson

B3. Identify the following rulers of Russia from brief descriptions. 10 pts each.

1. Nicknamed the "Iron Czar", he ruled from 1825 to 1855.

Answer: Nicholas I

2. This Russian Czar ruled from 1855 to 1881 and during his reign issued the Edict of Emancipation that freed the serfs.

Answer: Alexander II

T4. A graduate of the Carnegie Institute of Technology, he gained success in New York City as a commercial artist in the 1950's. For 10 points, name this artist best known for his silk-screen paintings of Campbell Soup Can labels.

Answer: Andy Warhol

B4. Name the following artists, 10 pts each.

1. This Flemish artist's best known work is "Giovanni Arnolfini and His Wife"

Answer: Jan Van Eyck

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2. The 18th and 19th century French artist who painted "Oath of the Horatii"

Answer: Jacques Louis David

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T5. The Masque of Pandora, Poems on Slavery, Voices of the Night, The Seaside and the Fireside, and Tales of a Wayside Inn. For 10 points, what 19th century American poet produced all these works?

Answer: Henry Wadsworth Longfellow

B5. Identify the authors of the following winners of the Pulitzer Prize for poetry for 10 points each.

1. The Age of Anxiety

Answer: W.H. Auden

2. John Brown's Body

Answer: Stephen Vincent Benet

T6. Pencil and paper ready. Suppose the price of a blender is increased by 50 percent, but that the new price is subsequently decreased by 50 percent. For ten points, by what percent will the final price be lower than the original price?

Answer: 25

B6. Identify these French mathematicians for 10 points each.

1. A mathematical prodigy, he had mastered Euclid's Elements by age 12. In 1645, he invented and sold the first modern calculating machine.

Answer: Blaise Pascal

2. This French expert in heat flow demonstrated that any periodic function could be expanded as an infinite series of sums of sines and cosines.

Answer: Joseph Fourier

T7. It is the name of both a biblical book and its heroine and is derived from the Persian word for "star". For 10 points, identify this woman who became the queen of Ahasuerus in the Old Testament.

Answer: Esther

B7. Name the wives of these Biblical figures for 5 points each.

1. Isaac

Answer: Rebecca

2. Boaz

Answer: Ruth

3. Aquilla

Answer: Priscilla

4. Hosea

Answer: Gomer

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T8. Its net effect is to remove energy, bit by bit, from cellular fuels by a series of chemical reactions. For 10 points, identify this cycle which stores energy in the form of ATP.

Answer: Krebs cycle or Citric acid cycle or tri-carboxylic acid cycle

B8. Identify these external cell parts for 10 points each.

1. It is a long thread-like organelle projecting from the surface of a cell, for example in motile gametes, algae, and protozoa. Usually only one and never more than a few are present per cell.

Answer: flagellum or flagella

2. They are short fine thread-like organelles which project from the surface of some eukaryote cells such as paramecium. They move and beat rhythmically to transport fluid and particles along the surface of the cells.

Answer: cilium or cilia

T9. This U.S. state contains Joshua Tree National Monument, Cabrillo National Monument, and Lassen Volcanic National Park. For ten points, name this state which also contains Sequoia National Park.

Answer: California

B9. Answer the following questions about straits.

1. For 5 points each, what two of the Great Lakes are joined by the Strait of Mackinac?

Answer: Lake Michigan, Lake Huron

2. For 10 points, what is the name of the strait that separates the island of Sicily from mainland Italy?

Answer: Strait of Messina

T10. Founded by John Locke, it flourished in Britain and has had a major impact on contemporary philosophy. For ten points, name this school of thought which insists that knowledge must come from sensory experience.

Answer: Empiricism

B10. For 10 points each, using the verb "to bake", provide the following verb forms.

1. passive participle

Answer: having been baked

2. perfect participle

Answer: having baked

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T11. He invented the calculus of variations and independently discovered the differential and integral calculus. For ten points, name this English scientist for whom the [S-I] unit of force is named.

Answer: Sir Isaac Newton

B11. Your team has gone on the rampage and taken control of the tournament. The first thing you do is seize the author of these questions and throw him off the top of Stone Mountain.

1. First, for 10 points, after 4 seconds, in feet per second, how fast is the author plummeting toward earth?

Answer: 128 feet per second

2. Second, for 10 points, given that the soon to be ex-writer hits the ground in about 6 seconds, what is the approximate height of Stone Mountain in feet? Base calculation on six seconds and give an exact answer.

Answer: 576 feet

T12. It was written in 1899 and is set in a Nebraska hotel. The story concerns a Swede who has come to meet wild life in the west and ends up getting killed in a brawl. For 10 points, identify this short story by Stephen Crane.

Answer: The Blue Hotel

B12. Give the authors of the following works of American literature beginning with "I" for 5 points each.

1. Imp of the Perverse

Answer: Edgar Allan Poe

2. In Cold Blood

Answer: Truman Capote

3. Ichabod

Answer: John Greenleaf Whittier

4. In Dubious Battle

Answer: John Steinbeck

T13. In the early 1700's the German chemist and physician Ernst Stahl developed a theory that all flammable materials contain a certain substance which left the burning material and was absorbed by air. For 10 points, what name did Stahl give to this substance, the existence of which was disproven by Lavoisier.

Answer: phlogiston

B13. Given the following atomic weights: sulfur - 32, silicon - 28, oxygen - 16, hydrogen - 1. Find for 10 points each.

1. the fraction of sulfur by mass in sulfuric acid

Answer: 16/49 or 32/98

2. the fraction of silicon by mass in quartz

Answer: 7/15 or 14/30 or 28/60

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T14. Ruddigore, Iolanthe, The Yeoman of the Guard, The Gondoliers, Trial by Jury, The Mikado, and HMS Pinafore. For 10 points, what famous British duo created these operettas?

Answer: Gilbert and Sullivan

B14. Identify the Mozart operas featuring the following characters for 10 pts each.

1. Donna Anna, Zerlina

Answer: Don Giovanni

2. Tamino and Pamina

Answer: The Magic Flute (Die Zauberflote)

T15. It is the common name for a group of carnivorous marine mollusks in the same class as the cuttlefish and chambered nautilus. They have elongated, slender bodies with triangular caudal fins. For 10 points, identify these tentacled creatures, the largest of which can reach 50 feet in length.

Answer: squid

B15. Identify the phylum to which the following members of the animal kingdom belong for 10 points each.

1. hydras, sea anemones

Answer: coelenterata or coelenterates

2. crab, lobster

Answer: arthropoda or arthropods

T16. After attempting to duel Romeo at a feast, the next day he kills Mercutio, and Romeo kills him. For 10 points, identify this character in Romeo and Juliet.

Answer: Tybalt

B16. For 5 points each, name the poet and work from which the following lines are taken.

1. "They also serve who only stand and wait"

Answer: John Milton, On His Blindness

2. "A heavy weight of hours has chained and bowed/One too like thee, tameless, swift, and proud"

Answer: Ode to the West Wind, Percy Shelley

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T17. When a river emerges from a mountain into a lowland, it often builds up a low, cone-shaped deposit. For ten points, what geological term refers to such deposits?

Answer: Alluvial Fan (or Alluvial Cone)

B17. Identify the following moons of the Solar System for 5 points each.

1. These are the twin moons of Mars.

Answer: Deimos, Phobos

2. What satellite discovered by Christiaan Huygens in 1656 is Saturn's largest moon?

Answer: Titan

3. What moon of Saturn, discovered in 1848 by Bond and Lassell, shares its name with an unfinished Keats poem about the fall of a Titan?

Answer: Hyperion

T18. He graduated from the University of North Carolina and took up the practice of law. In 1825 he was elected to the U.S. House and ten years later became Speaker. For 10 points, identify this man elected president in 1844.

Answer: James K. Polk

B18. For 5 points each, identify the amendment to the Constitution which accomplished the following.

1. Forbade cruel and unusual punishment

Answer: 8

2. Enumeration of rights in the Constitution shall not be construed to deny or disparage others retained by the peoples.

Answer: 9

3. Prohibits double jeopardy

Answer: 5

4. Required separate ballots for president and vice-president in the electoral college.

Answer: 12

T19. Pencil and paper ready. Given the equation of motion $y = 3 \cos(5t + \pi)$, what is the amplitude?

Answer: 3

B19. For 10 points each, using the same equation of motion, $y = 3 \cos(5t + \pi)$

1. What is the particle's maximum velocity in the y direction?

Answer: 15

2. What is the particle's velocity at $t = \pi$?

Answer: 0

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T20. In the Book of Isaiah, he is called "God's anointed," because, after conquering Babylon in 538 B.C., he allowed the Hebrews to return to Palestine. For 10 points, identify this Persian ruler, the son of Cambyses and founder of the Achaemenid dynasty.

Answer: Cyrus (the Great)

B20. Answer the following questions about the battle of Zama. 5 pts each.

1. In what year was it fought?

Answer: 202 B.C.

2. In what war was it fought?

Answer: 2nd Punic War

3. What commander lost the battle?

Answer: Hannibal

4. What Roman defeated Hannibal?

Answer: Scipio Africanus

T21. It has an average speed of 4 miles per hour and at its start has a temperature of 80 degrees. For 10 points identify this current that merges with the North Atlantic Drift at 40 Degrees north and 60 degrees west.

Answer: Gulf Stream

T22. It was denounced by Hitler and finally broken when in March, 1936, the German remilitarized the Rhineland. For 10 points, identify this 1925 pact guaranteeing post World War I borders of the Rhineland, Belgium, France and Germany.

Answer: Locarno Pact