

Finals - Elementary School

Tossups

(Tossup 1) After undergoing meiosis, the “mother cells” of this organism have their lifespan reset. *S. pombe* and *S. cerevisiae* are commonly studied examples of these organisms, which were the first eukaryotes to have their genome sequenced. Some varieties of these fungi reproduce asexually via budding. For the point, name these single celled fungi that are used to make bread rise.

ANSWER: yeast (prompt on fungus or fungi before “fungi” is read)

(Tossup 2) A character in this play laments that “I made the last payment on the house today” in its final section, “Requiem.” That section describes the funeral of a man who commits suicide in a car crash. The main character of this play regrets not having gone to Alaska with his brother Ben, tries to convince his boss to obtain a job with less travel, and feuds with his sons Biff and Happy. For the point, name this play about the businessman Willy Loman by Arthur Miller.

ANSWER: Death of a Salesman

(Tossup 3) This city was legendarily founded by Dido after she fled from Tyre. Cato the Elder ended many of his speeches by saying that this city must be destroyed. A general from this city-state was defeated by Scipio Africanus during an invasion of Rome that started with him crossing the Alps. For the point, name this North African city-state that employed Hannibal during the Second Punic War.

ANSWER: Carthage

(Tossup 4) The shielding constant is subtracted from this quantity in Slater’s rules for determining effective charge. Beta-minus decay results in this quantity increasing by one. The atomic radius is inversely related to this quantity’s associated charge. Mendeleev’s periodic table arranged elements by this quantity. For the point, name this quantity, the sum of the number of protons in a particular element’s nucleus.

ANSWER: atomic number

(Tossup 5) This country is home to False Bay, where the fishing villages of Pringle Bay and Gordon’s Bay lie. The eThekweni metro area in this country is home to the city of Durban. The Cape of Good Hope is located in this country and names its largest port city.. Johannesburg is the largest city in, for the point, what country with capital cities at Bloemfontein, Cape Town, and Pretoria?

ANSWER: South Africa

(Tossup 6) An eighth-century *Symbolum* named for these people adds the “communion of saints” to the Old Roman Symbol. These people’s namesake Creed is a statement of belief in “the resurrection of the body” and “the holy catholic Church,” and has one article for each of these twelve primary followers of Jesus. The book of Acts describes the deeds of, for the point, what early Christian figures, including Peter and John?

ANSWER: Apostles (accept Symbolum Apostolorum; accept Symbolum Apostolicum; accept Apostles’ Creed; accept Symbol of the Apostles; accept Acts of the Apostles; prompt on “disciple” or “disciples”)

(Tossup 7) This practice, called nagnya, is one of the twenty-two afflictions endured by Digambara monks. Nuns of the same order may not participate in this practice, which is also not followed by a “white-clad” school of monks who nevertheless follow the principle of extreme nonviolence. For the point, name this religious practice followed by “sky-clad” Jain monks, who are not permitted to own body coverings.

ANSWER: nudity (accept clear descriptions of being naked; accept not wearing clothes)

(Tossup 8) This molecule is absorbed by cells upon activation of the GLUT4 transporter. Glycogen is a polymer chain of this molecule that is stored in the liver. When paired with fructose, this molecule forms sucrose. This molecule’s blood levels are controlled by glucagon and insulin, and high levels of this molecule are a symptom of diabetes. For the point, name this simple 6-carbon sugar used for energy by cells.

ANSWER: glucose (prompt on sugar)

(Tossup 9) This artist depicted a worried Jesus and his disciples on a boat in the title body of water. In addition to *Storm on the Sea of Galilee*, this artist depicted a Persian king looking at a hand writing on the wall in *Belshazzar’s Feast*. This artist also painted *The Anatomy Lesson of Doctor Nicolaes Tulp* and a painting men led by Frans Banning Cocq. For the point, name this Dutch artist of *The Night Watch*.

ANSWER: Rembrandt von Rijn (accept either underlined portion)

(Tossup 10) This conflict started after the raising of a certain standard at Nottingham. During this conflict, Prince Rupert of the Rhine was defeated at Naseby by the New Model Army. This conflict, which was fought between the Royalist Cavaliers and Parliamentarian Roundheads, included the capture and execution of Charles I. For the point, name this war in which Oliver Cromwell interrupted the House of Stuart’s control over a certain country.

ANSWER: English Civil War

(Tossup 11) A poem by this author ends with the line “The nighttime Whatifs strike again!” In 1960, this author published a collection of his cartoons under the title *Now Here’s My Plan*. The life-long relationship between a boy and an apple tree is the subject of this author’s book *The Giving Tree*. For the point, name this author of children’s poetry books such as *The Light in the Attic* and *Where the Sidewalk Ends*.

ANSWER: Sheldon Allan “Shel” Silverstein

(Tossup 12) The Weston differential form of this device is used for moving extremely heavy objects. Atwood machines contain two of these devices which are used to verify the laws of motion under constant acceleration. A block and tackle setup is used to increase the mechanical advantage of these devices. For the point, name this simple machine that consists of a rope on a wheel and axle which are used to lift objects.

ANSWER: pulley

(Tossup 13) In 1981, this country officially annexed the Golan Heights which it had seized from Syria a decade prior. This country launched the preemptive Operation Focus against neighboring Egypt to begin the Six-Day War. This country has had multiple disputes over the Gaza Strip which officially belongs State of Palestine. For the point, name this country where soldiers have defended Jerusalem in multiple wars.

ANSWER: Israel

(Tossup 14) This river's valley contains the cities of Brownsville and Reynosa. This river forms the southern edge of Big Bend National Park. The city of Laredo lies along this river, which is crossed by the Bridge of the Americas, linking Ciudad Juarez with El Paso. This river was previously known as Rio Bravo. For the point, name this river that forms the border between Texas and Mexico.

ANSWER: Rio Grande (accept Rio Bravo before it is read)

(Tossup 15) This literary character marries Badroulbador, who is tricked by a salesman who had earlier posed as this man's uncle by claiming to be the brother of Mustafa the Tailor. This man accidentally discovers a ring possessed by a powerful spirit, then meets a stronger spirit that allows him to marry the daughter of a sultan. For the point, name this literary character who was added to the *Thousand and One Nights* for a story in which he discovers a jinn in a magic lamp.

ANSWER: Aladdin (accept Ala ud-Din)

(Tossup 16) While running for president, one mayor of this city proposed a tax on robots that replace workers. One former mayor of this city vowed to not accept any campaign contributions, leading to his ineligibility to attend Democratic presidential debates. In addition to Bill de Blasio and Michael Bloomberg, Rudy Giuliani also served as mayor of this city. For the point, name largest city in the United States.

ANSWER: New York City (accept NYC)

(Tossup 17) This instrument, played by Bill Evans, opens Miles Davis's song "So What" along with a bass. A player of this instrument formed the band Headhunters and recorded the song "Watermelon Man." Another player of this instrument recorded the album *Time Out*, which features the song "Take Five." Duke Ellington, Herbie Hancock, and Dave Brubeck played, for the point, what keyboard instrument with 88 keys?

ANSWER: jazz piano

(Tossup 18) The Trophic state index is most commonly used to measure these structures. When these structures experience high levels of dissolved CO₂ they may release mazuku winds during limnic eruptions. The endorheic variety of these structures may have high salinity levels. When a river is cut off it can form the Oxbow form of these structures. For the point, name these inland bodies of water.

ANSWER: lake (accept pools; accept ponds)

(Tossup 19) One philosopher from this country claimed that each person contained four “sprouts” of virtues that could be cultivated. That philosopher from this country, Mencius, was a follower of another philosopher from this country who described the virtues of humanity and ritual, or ren and li, in *The Analects*. For the point, name this home country of Confucius and Laozi.

ANSWER: China (accept Zhongguo)

(Tossup 20) This man spent time at the “Little White House” near a rehabilitation center he founded in Warm Springs, Georgia. An illness that afflicted this man was likely Gullian-Barré syndrome. This President, who founded March of Dimes, requested that a door be added to the Resolute Desk to hide his leg braces. The Secret Service would destroys pictures showing this President in a wheelchair. For the point, name this President possibly stricken by polio.

ANSWER: Franklin Delano Roosevelt (accept FDR; prompt on Roosevelt)

(Tossup 21) Pirithous became stuck to a stone seat when he attempted to kidnap this goddess. A cult dedicated to this Greek goddess and her mother held an annual initiation called the Eleusinian Mysteries. This goddess, also known as Kore, or the maiden, was doomed to spend part of the year away from Demeter when she consumed some of the seeds of a pomegranate. For the point, name this Greek queen of the underworld, the wife of Hades.

ANSWER: Persephone

(Tossup 22) These numbers can be shown to be uncountably infinite because their counterpart is countably infinite while the reals are uncountably infinite. Transcendental numbers are a subset of these numbers, whose other examples include the natural logarithm of 3 or the square root of 2. These numbers have decimal representations that do not terminate or repeat. For the point, name this kind of number that is named because it cannot be expressed as fractions of integers.

ANSWER: irrational numbers

(Tossup 23) Oliver Wendell Holmes Jr. used the example of lying about one of these events in a theater to explain non-protected speech. Max Blanck and Isaac Harris were put on trial in the aftermath of one of these events at the Triangle Shirtwaist Factory. In 1871, one of these events was legendarily started when Mrs. O’Leary’s cow kicked over a lantern. For the point, name this type of disaster, one of which destroyed a large portion of Chicago’s wooden buildings.

ANSWER: fire

(Tossup 24) This body's existence was mathematically proved by Urbain Le Verrier before it was observed by Johann Gottfried Galle. This body is orbited by the Lassell and Arago rings. This planet was formerly home to the Great Dark Spot. This planet's orbit is intersected by Pluto's at two points. For the point, name this farthest planet from the sun, named for the Roman god of the sea.

ANSWER: Neptune

(Tossup 25) In this literary work, Belle's husband returns to their busy home with news of her ex-fiancé, and the three daughters of Mr Fezziwig attend a boisterous company party. This work's protagonist meets his former business partner, Jacob Marley, who warns him that he will be visited by spirits representing holidays "Yet to Come," "Present," and "Past." For the point, name this Charles Dickens work in which Ebenezer Scrooge learns to have sympathy for Bob Cratchit and his son, Tiny Tim, during a winter holiday.

ANSWER: A Christmas Carol

Tiebreakers

(Tossup 26) Gamow's liquid drop model explains the shape of these structures. The Plum Pudding model was formerly used to describe these structures. Fission occurs when these structures split, which is used in this structure's namesake power. These structures are composed of gluons, neutrons, and protons. For the point, name these structures that are orbited by electrons, the centers of atoms.

ANSWER: atomic nucleus

(Tossup 27) One man at this event was dubbed "The Weeper," and failed to secure the port of Fiume for his country. John Foster Dulles drafted the infamous Article 231 during this event, known as the War Guilt Clause. Georges Clemenceau and David Lloyd George were members of the "Big Four" who participated in this event. For the point, name this 1919 meeting of the victorious Allied Powers that produced the Treaty of Versailles.

ANSWER: Paris Peace Conference (prompt on partial answers)