

New Trier Scobol Solo 2014

Championship Phase II



21. A correction to find the size of these constructs using an extra term of $\frac{z^2}{2n}$ is named for Edwin Bidwell Wilson. This concept was introduced by a mathematician who helped develop null hypothesis testing, Jerzy Neyman [YEH-zhee NYE-mun]. The size of one of these constructs depends on the inverse error function. One way to find their size is the percentile bootstrap method, and these constructs are labeled with a percentage equivalent to one minus alpha, the significance level. Some graphs shows these constructs using error bars, which are vertical segments, of an appropriate length. It is common to size these quantities to correspond to 95% certainty. Name these “intervals” that, with a certain probability, contain a measurement.

Answer: (percentile) confidence intervals [or score intervals; prompt on confidence levels]

22. This raid involved the destruction of 11 MiG fighters, which was estimated to be one-quarter of the invaded country’s air force. Two of the people killed in this raid belonged to Germany’s Baader-Meinhof gang. This raid was planned by Dan Shomron and was aided by Kenya, who allowed the attackers to refuel. The brother of one of the people who died is now a prime minister. This raid occurred on July 4, 1976, after the hostage situation leading to it was extended by Idi Amin. Name this raid that followed the hijacking of an Air France plane travelling from Israel that freed hostages in its namesake Ugandan city.

Answer: Entebbe [en-TEH-bee] raid [accept similar answers that mention Entebbe; accept Operation Thunderbolt; prompt on Operation Yonatan or Operation Jonathan]

23. In this play, Andrey says that he would rather talk to Ferapont, who cannot hear well, then his own wife who does not understand him. Andrey’s wife tells the Carnival party not to come over because their son Bobik is sick. Later in this play, Andrey says that being in a duel or being present at one is immoral after Solyony challenges Baron Tuzenbach. In this play, Vershinin complains that his wife repeatedly attempts suicide. Andrey apologizes to the title characters of this play after mortgaging their house to pay his gambling debts. Name this play about Olga, Maria, and Irina Sergeyevna written by Anton Chekhov.

Answer: Three Sisters [or Tri Sestry]

24. This organization is now headed by former Human Rights Campaign chair Fred Hochberg. This independent agency guaranteed a ten-million-dollar loan to Solyndra before Solyndra went bankrupt in 2011. Its recent policies have supported Boeing while having a negative impact on international flights by U.S. airlines, which has led for calls to dismantle this organization. Its charter was scheduled to expire on September 30 but was extended by nine months as part of a congressional continuing resolution, despite opposition from libertarians and Tea Party groups. Name this agency that guarantees loans, many of which support purchases by businesses in Third World nations of U.S. products.

Answer: Export-Import Bank of the United States

25. One poem by this man urges the “Loves and Cupids” to mourn for a creature that was “as sweet as honey”, whose death made the speaker’s lover’s eyes “swollen and red with weeping.” Another poem by this man is addressed to his lover and tells her to “let us live and love.” Another poem addressed to that lover states that the number of “grains of Libyan sand that lie between hot Jupiter’s oracle” is equal to the number of kisses from his lover that would satisfy him. The speaker of one poem by this man “speaks in vain” to the “mute ashes” of the speaker’s dead brother. Name this Roman poet of “Ave Atque Vale” who addressed many of his poems to his lover Lesbia.

Answer: (Gaius Velarius) Catullus [kuh-TULL-us]

26. Several of the people involved with killing this man were in turn killed by associates of Colonel Luis José León Estévez, but Luis Amiama Tió and Antonio Imbert Barrera survived. This leader was criticized for the murders of three of the four Mirabal sisters and for the attempted assassination of Rómulo Betancourt, the president of Venezuela. Based on American tradition, this person did not run in the election of 1938, but he returned to office for ten years starting in 1942 before deferring to his brother Héctor. This leader is blamed for the Parsley Massacre, during which thousands of Haitians were killed. Name this leader who renamed the capital of Santo Domingo when he was president of the Dominican Republic.

Answer: Rafael (Leónidas “El Jefe”) Trujillo [troo-HEE-yoh] (Molina)

27. When the reverend in this story goes in front of a crowd, he can “hear his microbes gnaw”. That crowd filled 412 fixed seats and 68 extra chairs in addition to other spaces. Earlier in this work, Cox tries to stop Johnny from sending out the early mail, but the mail has already gone out. At the beginning of this story, the house of a retired cashier is visited by a man claiming to be a former gambler. Reverend Burgess eventually writes a letter asking for gratefulness from the Richards family because they had saved each other when Burgess did not read their claim, stating “You are far from being a bad man: go, and reform.” Name this work in which a sack of gold turns out to be a sack of lead in a plot to embarrass a town, a short story by Mark Twain.

Answer: “The Man That Corrupted Hadleyburg” [do not accept “The Man Who Corrupted Hadleyburg”]

28. One method to transition from one type of this phenomenon to another uses a Fresnel rhomb. When this phenomenon happens twice in succession, the resulting intensity can be found by multiplying by the cosine squared of theta using the Law of Malus. The shapes used to classify this phenomenon are based on the shape traced by the tip of the electric field vector, and those shapes are linear, circular, and elliptic. This phenomenon can occur by setting the incident angle to Brewster's angle and by double refraction in birefringent materials. Name this phenomenon in which transverse waves capable of oscillating in many directions are selected based on orientation.

Answer: polarization [accept word forms and more specific answers]

29. The subject of this painting is posed similarly to the subject of Domenico Fiasella's *Artemisia*, which was painted about a decade before it. Engravings of Cupid and a man with a pole or rake are visible on the tiles on the bottom right of this painting near a foot warmer. A brass basket and a weaved basket hang next to a window with a cracked pane in the opposite corner of this painting. This painting, which hangs in the Rijksmuseum ["RAKES-museum"] in Amsterdam, includes a table lined with several loaves of bread, which possibly will be used to make bread pudding. A woman dressed in a linen cap with a blue apron around her waist is pouring a white liquid into a pot in this painting. Name this painting by Jan [YAHN] Vermeer.

Answer: *The Milkmaid* [or *De Melkmeid* or *Het Melkmeisje*; accept *The Kitchen Maid*]

30. In one species, this phenomenon is controlled by an operon [AH-pur-ahn] that relies on quorum sensing, and thus only activates when population density is high. One organ that displays this phenomenon, the esca, is found at the end of another organ that resembles a fishing rod and is called the illicium [ih-LIH-see-um]. In bacteria such as *Vibrio fischeri* [vih-BREE-oh fih-"SHARE"-ee], this process tends to be controlled by the *Lux* operon, and occurs via the reaction of a flavin mononucleotide. This process occurs when luciferins are excited by luciferases, and is seen in angler fish and fireflies. Name this phenomenon in which an organism emits light.

Answer: bioluminescence [accept word forms; prompt on answers describing the emission of light]

31. One work by this sculptor, which he compared to Celtic crosses, is his *Upright Motive Number One*. This sculptor depicted a thin man and woman sitting next to each other wearing crowns, and copies of that work are at Glenkiln Sculpture Park in Scotland and Hirshhorn Sculpture Garden. In addition to *King and Queen*, this sculptor has made several portrayals of draped women. His works showing details encased inside a curved structure are called *Upright Internal/External Form*. One work by this sculptor that looks like a mushroom cloud is located on the University of Chicago campus. Name this 20th-century English sculptor who made several reclining figures.

Answer: Henry Spencer Moore

32. These compounds can change their stereochemistry through a process called mutarotation [MYOO-tuh-“rotation”], where they switch between their alpha and beta anomers [AAN-oh-murz]. These compounds isomerize [“eye”-SAH-mur-“eyes”] between an open chain and a cyclic form; that cyclic form can be depicted by a Haworth projection. Nucleotides consist of a phosphate and a nitrogenous [ny-TRAH-juh-nuss] base bound to a five-carbon compound of this type. These substances are the fundamental units that make up compounds such as cellulose and glycogen, and their names tend to end with “-ose”. Name these compounds that include fructose and glucose, the building blocks of carbohydrates.

Answer: monosaccharides [accept sugars; accept carbohydrates before “fundamental units” and prompt thereon thereafter; prompt on saccharides]

33. The city of Collinsvale on this island was originally named Bismarck for its German population, and German immigrants built and settled its Butlers Gorge Dam. There is a conservation area in the northwest of this island called Tarkine Forest. Wine production in this place is centered in the Tamar Valley in its northeast, near the city of Launceston. Mount Ossa is the highest point on this island, which is separated by the Banks Strait from Clarke and Cape Barren Islands. This island was initially named Van Diemen’s Land after its Dutch discoverer. The Bass Strait separates it from Australia, of which it is a state with capital Hobart. Name this island home to a marsupial called its “devil”.

Answer: Tasmania

34. This person and Jean Monnet [zhahn maw-nay] negotiated with James F. Byrnes to cut some of France’s loan obligations to the United States. This person was the last chairman of the Provisional Government of the French Republic before Paul Ramadier [rah-mah-dee-ay] headed the Fourth Republic. This leader headed the Popular Front alliance that included his Workers’ International Party, and he was credited and blamed for the Matignon [mah-teen-yaw] Agreements, which established a right to strike and the 40-hour work week. Ruling along with Édouard Daladier [ayd-war dah-lad-yay] and Albert Lebrun, this person was briefly the prime minister of France three times. Name this leader who at one point was imprisoned in Buchenwald, the first Socialist and first Jewish Prime Minister of France.

Answer: (André) Léon Blum

35. One character in this novel compares stars to apples on a stubborn tree. That statement is made to Abraham as the two characters deliver beehives. Another character in this novel is addressed as Sir John even though he is a straggler named Jack. After a wedding in this novel, Marian drinks heavily and Retty tries to drown herself. Those women worked with the groom at Talbothays. Another woman who had hoped to marry the groom, Mercy Chant, eventually marries Reverend Cuthbert instead. The goodness of that groom, Angel Clare, contrasts with the evil of Alec, who impregnates the title woman. Name this novel by Thomas Hardy.

Answer: Tess of the D’Urbervilles

36. This person was the chair of the Peace Information Center, and he was indicted for failing to register it. When that group dissolved, this person and Linus Pauling established the American Peace Crusade. Moustafa Bayoumi referenced this person when he titled a book *How Does It Feel to Be a Problem?*. This person worked with William Monroe Trotter to start a movement in 1905 that opposed segregation. This person explained the concept of double consciousness and wrote “The problem of the 20th century is the problem of the color line.” This first editor of *The Crisis* wrote the book *The Souls of Black Folk*. Name this thinker who had a rivalry with Booker T. Washington.

Answer: W(illiam) E(dward) B(urghardt) Du Bois

37. This character avenged his father by killing King Lyngi and Lyngi’s brothers. This character then killed his foster father’s brother by hiding in a pit and stabbing him, and he then beheaded his foster father after listening to birds. This character selected his horse because it was the only horse that did not swim out of a river. His sword is made of pieces of his father’s sword, can cut through an anvil, and is called Gram. This character took the shape of Gunnar in order to fool Brunhilde in the Volsunga Saga. Name this rider of Grani and killer of Fafnir, the title character in the third opera of Wagner’s [VAHG-nur’z] *Ring Cycle*.

Answer: Sigurd [or Sigfried]

38. One of these types of musical compositions by Joseph Joachim is nicknamed “in the Hungarian manner”; Joachim is the dedicatee of the best known of these compositions by Max Bruch. The Bach “Double” is not a fugue but instead a double type of this work. Edgar Meyer and Jennifer Higdon have composed pieces of this type for Hilary Hahn. The piece of this type by Jean Sibelius was written for Willy Burmester, who never performed it, and became famous after a recording by Jascha [YAH-shah] Heifetz. Each of Vivaldi’s *The Four Seasons* is one of these types of compositions. Name this type of piece written for an orchestra and a soloist such as Itzhak Perlman.

Answer: violin concertos [or violin concerti; prompt on concerto or concerti]

39. The development of the theory behind this process followed the description of fracture zones by Henry Menard, and its discoverers studied the analogous process of the development of ophiolite [OH-fee-oh-“light”]-containing peridotite [puh-RIH-doh-“tight”]. Measurements of heat flow and seismic wave velocity have supported the theories behind this process, and further support was given by stripe-shaped anomalies in the Earth’s magnetic field. Robert Dietz and Harry Hess are credited for discovering it. This process is considered the opposite of subduction, and it involves magma forming new crust. Name this part of plate tectonics that takes place at the center of mid-ocean ridges.

Answer: seafloor spreading [accept variations that include both underlined words or forms thereof; prompt on plate tectonics]

40. Scholastics who developed this theory quoted the Book of Luke, chapter 3, verse 14, which states “Be content with your pay.” In *Summa Theologica*, Thomas Aquinas quoted Augustine in saying that one of the conditions of this theory is proper authority. The school of Salamanca further developed Aquinas’ theory on this subject to include the principle of the probability of success. This theory is often broken down into the right to begin and the proper conduct once you have begun, the latter of which addresses the treatment of prisoners and noncombatants. Name this theory known in Latin as *jus bellum*.

Answer: just wars [accept jus bellum or jus belli before “just”; prompt on war or casus belli or casus bellum]