

# NEW TRIER SCOBOL SOLO 2011

## ROUND 4

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1. This leader put down a counterrevolution by commanding his future brother-in-law Joachim Murat, who later put down the Second of May Uprising. This leader defeated Count von Bennigsen at the Battle of Friedland a few months after a less decisive outcome at Eylau, leading to his Treaties of Tilsit with Russia and Prussia. He had already defeated Prussia at the Battle of Jena-Auerstedt, where his army captured Carl von Clausewitz. This leader would later win the Battle of Borodino and enter Russia, but he eventually had to retreat, and his later loss at Leipzig ended the War of the Sixth Coalition. Name this General who was then exiled to Elba and later lost at Waterloo, the Emperor of the French.

ANSWER: Napoleon Bonaparte [accept either or both names; accept Napoleon I]

2. This poet wrote three pairs of letters in verse between heroic lovers, starting with letters between Paris and Helen, and those works are placed after fifteen letters written by heroines who were mistreated by their lovers. In addition to the *Heroides* (he-ROH-i-dees), this poet wrote a long work of elegiac (el-i-JYE-uhk) couplets explaining the origins of Roman holidays, his *Fasti* (FAS-tee). One of the most famous works by this writer explains to men how to find love in Rome, and one of his collections begins, "Of bodies changed to various forms, I sing." Name this poet of *Ars Amatoria* and *Metamorphoses*.

ANSWER: Publius Ovidius Naso

3. This US state borders Rainy River, and it contains Upper Red Lake and Lower Red Lake. Its Arrowhead Region contains Eagle Mountain and its four large iron ranges, the largest of which is the Mesabi. Its Northwest Angle in Lake of the Woods County is the only part of the United States outside Alaska north of the 49th parallel. This state forms part of the northwest border of Lake Superior and is known for its over ten thousand lakes. Name this state that includes Duluth (duh-LOOTH), and whose capital of St. Paul is one of the Twin Cities alongside Minneapolis.

ANSWER: Minnesota

4. Most traits governed by this principle are the result of haplo-insufficiency, and when production of hexosaminidase A [heks-o-SA-min-ee-dase A] is considered, Tay-Sachs disease shows this pattern of inheritance. Time to flowering was the only pea plant trait of this type studied by Mendel, and baritone voice and wavy hair are among the few human phenotypes (FEE-noh-"type") to result from it. People with sickle-cell trait, but not sickle-cell disease, show this kind of phenotype, which also results when red and white four o'clock plants are crossed. Often exemplified by the Palomino (pa-loh-MEE-no) horse and pink snapdragons, name this pattern of inheritance in which a heterozygous offspring displays a trait in between those of its dominant and recessive parents.

ANSWER: incomplete dominance [accept incompletely dominant or semi-dominance; prompt on blending; prompt on heterozygous before it is mentioned; do not prompt on "dominance" or "dominant"]

5. In Euclidean geometry, the finite groups formed by this type of mapping are equivalent to the finite Coxeter groups. In computer science, this term refers to the ability of a program to treat itself as data, allowing the program to modify itself. Matrices that perform this operation in two-space often take the form with top row cosine two theta, sine two theta and bottom row sine two theta, negative cosine two theta; those matrices have a determinant of negative one. This term also refers to certain relations that relate  $f$  of the quantity  $a$  minus  $x$  end quantity to  $f$  of  $x$ . When this type of transformation is combined with a translation, the result is its glide type. For even functions, this transformation can be found over the  $y$ -axis without changing the graph. Name this transformation that finds a mirror image.

ANSWER: reflection [accept word forms]

6. This person coined the word *eupsychian* (yoo-SAI-kee-un) to describe a society where people have good psyches (SAI-kees), claiming that good managers increase the health of their workers. Along with Anthony Sutich, this person started the *Journal of Humanistic Psychology*, and he often contrasted deficiency motivation with being motivation. He wanted to move the field of psychology beyond the behaviorist and psychoanalyst approaches, and one of his books was titled *Toward a Psychology of Being*. Name this author of *Motivation and Personality* who placed esteem just below self-actualization in his Hierarchy of Needs.

ANSWER: Abraham Maslow

7. This President supported the Mann-Elkins Act, which allowed the Interstate Commerce Commission to regulate telecommunications, and he suffered a drop in popularity when Alaskan claims involving coalmines were interfered with by his Interior Secretary Richard Ballinger. This President was a strong supporter of the 16th amendment creation of an income tax, which passed at the end of his term. Name this man who finished third in his re-election effort behind Wilson and Teddy Roosevelt in 1912, but eight years later was appointed Chief Justice of the Supreme Court.

ANSWER: William Howard Taft

8. One short story from this country is about a man remembering his grandfather after seeing a fishing rod, and a novel by the same author is about a tourist who thought he had cancer who is referred to in alternating chapters as "I" and "You". In another novel from this country, 105 men and three women are heroes who oppose a high-ranking adviser to an Emperor. Another work from this country is tied together by a stone that was abandoned when a goddess abandoned the heavens. Those works are *Soul Mountain*, *Water Margin*, and *Dream of the Red Chamber*. Name this country whose literature portrays the Buddhist monk Xuanzang (shoo-wen-zahng) in *Journey to the West*.

ANSWER: People's Republic of China [or PRC; do not accept "Republic of China"]

9. This man proposed the "explosion shower" theory of cosmic rays, and along with Durr and Weizsacker, he introduced the concept of symmetry to atomic systems. A namesake idea of his can be used to find the width of spectral lines and to show that a particle confined to a finite space must have kinetic energy; that idea includes the conjugate pairing of time and energy based on the matrix mechanics that this scientist developed with Born and Jordan. Name this physicist who stated that the precise position and momentum of an electron cannot be known simultaneously in his uncertainty principle.

ANSWER: Werner (Karl) Heisenberg

10. One work by this artist shows a tiger looking up on the left side, a man blowing into a conch shell on the bottom, and water pouring from a jug in the middle. In another work he showed two men being trampled while three men on horseback prepare to use their spears to hunt a crocodile and hippopotamus. In addition to *The Union of Earth and Water*, he painted a work showing Christ's foot on Mary Magdalene's shoulder and Saint John in a red robe bearing much of Christ's weight. Name this Flemish Baroque painter who portrayed Henry the Fourth and painted *Descent from the Cross* who is also known for his fleshy nudes.

ANSWER: Peter Paul Rubens

11. This country's Carlos Manuel de Céspedes (SAY-spay-days) tried to declare its independence, leading to the Ten Years' War. Julio Antonio Mella was assassinated after fleeing this country, which was blamed on this country's President Gerardo Machado. One of the revolutionaries who opposed Machado, Ramón Grau, would later become President, but a few years after his retirement this country was taken over in a coup led by Fulgencio Batista. Batista fled the country in 1959 after losing the Battle of Santa Clara to forces led by Che Guevara. Name this island nation that since 1959 has been run by Fidel Castro and his brother Raúl.

ANSWER: Republic of Cuba [or República de Cuba]

12. In combination with electron microscopy, the Auger type of this technique produces the most accurate maps of material surfaces, while iron-57 is the most common gamma ray source for the Mossbauer type. Liquid samples analyzed by another form of this technique are trapped between two salt plates, and the Beer-Lambert law models how the results of these techniques vary with concentration. Alcohol groups are identified in the range of 3200 to 3500 in the infrared form of this technique, while a neon light yields three green, three orange, and seven red lines when viewed by this technique. Used by Bunsen and Kirchhoff (KIR-kawff) to identify elements in the sun, name this technique that classifies matter by its absorption and emission of light.

ANSWER: spectroscopy

13. This author wrote about John Pearson, who is well cared for by his first wife Lucy Potts but not his second wife Hattie, in the novel *Jonah's Gourd Vine*. This author is also known for the folklore collection *Mules and Men* and the autobiography *Dust Tracks on a Road*. Her best known novel is about a woman who kisses Johnny Taylor and then marries Logan Killicks, Jody Starks, and Tea Cake. That work is about Janie Mae Crawford and set in Eatonville, Florida. This author's popularity increased after Alice Walker wrote an essay about finding her unmarked grave. Name this author of *Their Eyes Were Watching God*.

ANSWER: Zora Neale Hurston

14. This composer used a fugue (fyoog) from his music teacher Friedrich Wilhelm Zachow in the last of his Twelve Grand Concertos, and earlier parts of those pieces are nicknamed "the cuckoo and the nightingale". One of his pieces has a second suite in D Major which ends with a Lentement (LAHNT-mahn) and a Bourrée. Another work by this composer contains a famous La Rejouissance (reh-zhwee-swanss) movement. This composer also wrote *Zadok the Priest*, the first of his four anthems traditionally played at coronations of British monarchs. Name this composer of *Music for the Royal Fireworks* and *Water Music* famous for his oratorio *Messiah*.

ANSWER: George Frideric Handel

15. In Second Timothy, Paul says that only this man is with him. This person described John the Baptist's father Zechariah, and his writings contain the *Magnificat*, which is also known as *Mary's Song*. He dedicated his writings to Theophilus, and he told the Parables of the Unjust Judge and the Good Samaritan. In addition to writing one of the Gospels, this person wrote the Acts of the Apostles. Name this physician whose gospel is the third book in the New Testament, between Mark and John.

ANSWER: St. Luke the Evangelist

16. One example of this construct is Gosper Island, which tessellates the plane, and the multi- type of this construct is used to describe systems which require a spectrum of exponents to model their scaling rather than a constant. One of the standard types can be generated by repeatedly moving halfway towards a randomly selected vertex of a triangle or by shading the even numbers in an infinite Pascal's Triangle. Any standard type of this is linear when a log-log graph is made of repetitions vs scale. Examples include the Cantor Set, Sierpiński sieve, and Koch Snowflake. Identify these self-similar constructs with fractional dimension described by Benoit Mandelbrot.

ANSWER: fractals

17. One character in this play states that ravens, crows and kites look down on him, and the title character of this play makes a mistake when he says, "He is a dreamer; let us leave him: pass." In this play, a poet is almost killed because of who he shares a name with. The person he shares a name with proclaims, "Liberty! Freedom! Tyranny is dead!" That line is spoken after Casca and several other characters stab the title character, leading to his dying words, "Et tu, Brute!" (broo-TAY) Name this play by William Shakespeare set in Ancient Rome.

ANSWER: *The Tragedy of* Julius Caesar [do not accept or prompt on a partial answer]

**18.** The first monarch of this kingdom generally is considered to be Kenneth the First of the House of Alpin. A dispute over its throne in the 13th century after the death of Margaret, Maid of Norway was known as the Great Cause and resulted in the ascension of John Balliol. Most of this region was known as Fortriu and inhabited by Picts, and it was also known as Caledonia, consisting of most of the region north of Hadrian's Wall. One of this kingdom's greatest victories was at the Battle of Bannockburn under the leadership of Robert the Bruce. Name this kingdom that in 1707 united with England to form Great Britain.

ANSWER: Scotland

**19.** This person designed a house now on display at the Henry Ford Museum with O-Volving Shelves and a downdraft ventilation system. It was made of aluminum with acrylic windows, and the size of the bedrooms was adjustable. Along with Isamu Noguchi, this person also designed a three-wheel car with a canvas roof. His tombstone reads "Call Me Trintab", a reference to his claim to be sailing Spaceship Earth. Building on an idea developed earlier by Walther Bauersfeld, he became associated with a type of thin-shell structure. Name this engineer who used the brand name Dymaxion and received a patent for geodesic domes.

ANSWER: Richard Buckminster "Bucky" Fuller

**20.** The existence of the helium type of this phenomenon was confirmed in 2000 with the discovery of V445 Puppis, and these are normally classified by their light curve development speeds. Usually occurring in close binary systems, the dwarf type of this results when the accretion (uh-KREE-shun) disk reaches critical temperature, causing a change in viscosity. Unlike their more luminous counterparts, these events never lead to the formation of neutron stars. These events are triggered by the movement of hydrogen from a red giant to the surface of its companion white dwarf. Name these stellar explosions that eject much less matter than their "super" cousins.

ANSWER: novas or novae [do not accept "supernova"]

**TB1.** Mercuric amidochloride, an early antiseptic, is known as Millon's *this*. An imine (ih-MEEN) bonded to an alkyl (AL-kuhl) group forms the Schiff type of these compounds, which are oxide ion donors by the Lux-Flood theory. More common definitions of these compounds make them electron pair donors or proton acceptors, while Arrhenius (ah-RAY-nee-us) said they form hydroxide ions in water. Capable of turning red litmus paper blue, name this class of slippery, bitter-tasting chemicals that form solutions with pH greater than seven.

ANSWER: bases

**TB2.** This country was the final home of Ugandan dictator Idi Amin (EE-dee ah-MEEN). In 1975, the leader of this country was shot dead by his mentally ill nephew, and a 1996 truck bombing in this country killed nineteen US Air Force troops at Khobar Towers. The allowance by its king of American troops in this country was one of the reasons given for the 9/11 attacks. Name this country that takes up much of the Arabian Peninsula, and is known as "The Land of the Two Holy Mosques" because it contains Medina (muh-DEE-nuh) and Mecca in addition to its capital of Riyadh (ree-YAHD).

ANSWER: Saudi Arabia [accept answers including Saud]

**TB3.** Which animal...lent its head to Sobek, the Egyptian god of the Nile; bit off the hand of Captain Hook in *Peter Pan*; and has African and Saltwater species that should not be confused with their American cousin the alligator?

ANSWER: crocodile