

# NEW TRIER SCOBOL SOLO 2011

## ROUND 8

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1. This author wrote a novel in which the main characters are Lok and Fa, two Neanderthals. This author also wrote a trilogy based on the journals of the fictional Edmund Talbot which is called *To the Ends of the Earth*. In addition to novels such as *The Inheritors* and *Rites of Passage*, this author wrote a novel in which a dead parachutist is confused for a beast. That novel, whose title object is a pig's head on a stake, involves a power struggle between Ralph and Jack while they are with other boys on an island. Name this author of *Lord of the Flies*.

ANSWER: William Golding

2. This person became famous after spending a year in prison with Rustichello of Pisa following their capture at the Battle of Curzola. One of the final acts of this person with his older relatives was to escort Kokachin to her groom Arghun. Those older relatives were his father Niccolò and uncle Maffeo (mah-FAY-oh). The three of them were sent on a mission by Pope Gregory the Tenth after a different world leader requested one hundred educated people and oil from the lamp of the Holy Sepulcher (SEH-pull-ker). This person's stories were eventually collected in the book *Il Milione* (mil-YOH-nay). Name this 13th and 14th century Venetian who visited Kublai Khan.

ANSWER: Marco Polo

3. A piece of what was popularly considered the fourth craft in this series landed in Manitowoc, Wisconsin, and the third craft in this series was an unsuccessful attempt to map the Van Allen belt. The R-7 booster that launched missions in this program was later used in the world's first ICBM, and international protest arose when it was learned that the second craft's lone passenger was purposely subjected to oxygen deprivation, though it turns out she had already died from overheating. With its first craft famously transmitting two beeps per second through four antennas, name this Soviet satellite program that started the Space Race in October, 1957.

ANSWER: Sputnik

4. Originally a god from the Upper Kingdom, this deity was originally associated with the desert and was later associated with the Greek monster Typhon. One of this deity's jobs was to defend Ra, and he was often depicted on the front of Ra's boat, slaying his nemesis Apophis. This deity was tricked into condemning himself by a goddess disguised as a crying young woman complaining about the murder of her husband. While many Egyptian deities were associated with animals, the animal associated with this deity is unknown, and is named for him. This is the deity who dismembered Osiris before Isis put him back together. Identify this Egyptian deity often associated with chaos and darkness.

ANSWER: Seth [accept Sheth; accept Seteh; accept Setan; accept Sutekh]

5. The same finger position can be found in this painter's *The Knight with a Hand on His Chest*, *The Christ with the Cross*, and *Christ Stripped of His Garments*. One work by this artist shows the priest who commissioned it reading a prayer book in the lower right corner and the artist's then eight-year-old son wearing a dark ruffled outfit and pointing at the titular action. Another work he painted near the end of his life in 1614 shows the Alcántara Bridge with a line of white buildings rising to its right. Those works are *The Burial of the Count of Orgaz* and *View of Toledo* (toh-LAY-doh). Name this artist whose nickname reflects his birth on Crete.

ANSWER: El Greco [or Doménikos Theotokópoulos]

6. This university suspended professors Chandler Davis, Clement Markert, and Mark Nicholson during the McCarthy Red Scare. The Supreme Court cases *Grutter v. Bollinger* and *Gratz v. Bollinger* in 2003 determined that this university could use a narrowly tailored affirmative action program. During a 1960 campaign speech at this school John Kennedy proposed the Peace Corps, and at its 1964 graduation Lyndon Johnson proposed his Great Society. As an undergraduate, Gerald Ford played on this school's football team. Name this school that in 1837 moved from Detroit to its current location in Ann Arbor.

ANSWER: University of Michigan

7. This statement is equivalent to Proclus' axiom and Playfair's axiom, and it is used, often implicitly, in every known proof of the Pythagorean Theorem. This statement is also equivalent to the Triangle Postulate, which states that the sum of the angles of a triangle equals the sum of the angles of two right triangles. Its first use was to prove the congruence of alternate interior and alternate exterior angles. This statement is also equivalent to the Equidistance postulate, which describes the relationship between certain lines. Name this statement that is true for Euclidean geometry but false for elliptic and hyperbolic geometries, which states that given any line and any point not on the line, there exists exactly one line going through the given point that does not intersect the given line.

ANSWER: Euclid's (or Euclidean) parallel postulate [or fifth postulate; accept statements equivalent to the second half of the last sentence before it is read]

8. In one novel by this author, the protagonist befriends ex-violinist David Gerhardt while fighting in World War I. That protagonist created by this author is earlier forced to leave college after becoming friendly with the Erlich family and later marries a Prohibitionist named Enid Royce. Another work by this author is about the westward travel of Joseph Vaillant to establish a Catholic diocese in New Mexico. In addition to writing about Claude Wheeler in *One of Ours* and about Jean Marie Latour in *Death Comes for the Archbishop*, this author wrote about a Bohemian immigrant with the last name Shimerda. Name this Nebraskan author of *My Ántonia*.

ANSWER: Willa Cather

9. This element exhibits six solid-state phase transformations before reaching a liquid state, more than any other element. It probably would have been discovered by McMillan and Abelson, but when they joined the Manhattan Project, this became the first element discovered by Glenn Seaborg. It made up much of the core of The Gadget detonated in the Trinity test, and it was used in the Fat Man bomb dropped on Nagasaki. This is used in an alternative to enriched uranium fuel known as mixed oxide fuel. Name this radioactive element found just after uranium and neptunium in the Periodic Table.

ANSWER: plutonium [or Pu]

10. This key signature was used for the *Leningrad Symphony* by Dmitri Shostakovich, the only symphony by Paul Dukas, and the only complete symphony by Richard Wagner. It was also used for Mozart's *Linz* and *Jupiter* symphonies, and it is used to nickname two of Franz Schubert's symphonies. One can play this major scale on a violin by starting with a low third finger on the G string, can play this chord on a guitar by leaving the G and high E strings open, and can play this scale on the piano using only the white keys. Name this major scale that does not have any sharps or flats.

ANSWER: C Major [only C is required after "major"; otherwise prompt on C]

11. This person directed Edmund Gaines and Colonel Clinch to take over what was known as the Negro Fort. He had earlier replaced Thomas Pinckney and Benjamin Hawkins as the chief negotiator in the Treaty of Fort Jackson, which was signed after he led troops to victory over a group known as the Creek Red Sticks at the Battle of Horseshoe Bend. He was named Military Governor of Florida after Spain signed the Adams-Onís Treaty following this man's success in the First Seminole War. Name this commander at the Battle of New Orleans who later became the seventh President of the United States.

ANSWER: Andrew Jackson

12. Recombinant deoxyribonuclease (dee-AHK-see-rai-boh-NOO-klee-ays) is one treatment for this disorder, whose gene gives carriers some resistance to cholera (KAH-lur-ah) and codes for a protein missing one phenylalanine (fen-l-AL-uh-neen). Males with this disorder may be sterile due to congenital absence of the vas deferens, and *Pseudomonas* is the most common cause of infection in adults with it. The name of this disease comes from the scarring observed in the pancreas, and the inability of chloride ions to cross cell membranes results in abnormally high salt excretion, which allows this disease to be diagnosed by a sweat test. Requiring continuous intake of antibiotics to prevent respiratory infections, name this autosomal recessive disorder in which mucus buildup blocks the digestive tract and clogs the lungs.

ANSWER: cystic fibrosis [or CF]

13. This person added the song "Something Just Broke" to one of his productions; that work begins and ends with the song "Everybody's Got The Right". Another one of this man's works opens with the song "Comedy Tonight". Those works are *Assassins* and *A Funny Thing Happened on the Way to the Forum*. His collaboration with Jule Styne led to the songs "Everything's Coming up Roses" and "Together Wherever We Go", while his collaboration with Leonard Bernstein produced the songs "I Feel Pretty" and "Maria". Name this lyricist of *Gypsy* and *West Side Story*.

ANSWER: Steven Sondheim

14. A subset of this mountain range is known as the Research Range and contains Mount Reguly and its tallest mountain, which is sometimes called "People's Mountain". Their southern end contains Sanarka River and is at Mugodzhar Hills, and Nazi war plans drawn up by Hitler established this range as a future border of the Reich. These are near the towns of Orsk and Yekaterinburg, and like the river it shares its name with, it is located in Kazakhstan and Russia. Name this natural border between the continents of Europe and Asia.

ANSWER: Ural Mountains [or Urals]

15. In one work by this author, a promise is made that anybody who returns the engine of the *Durande* can marry Déruchette. In another novel by this author, Jehan is adopted by his older brother and eventually killed by another person adopted by his brother. Another work by this author features a man who goes to the Field of the Lark every day. In addition to *Toilers of the Sea*, this author wrote about one woman who grows up as a servant for the Thénardiens (teh-NAHR-dee-ays) in Montfermeil (mon-fair-may) and grows to love Marius, and this author wrote about another woman who marries Pierre Gringoire (grin-gwar), has a pet goat Djali (jha-lee), and is sought by Claude Frollo. His two best-known protagonists are Quasimodo and Jean Valjean [zhahn vaal-zhahn]. Name this author of *The Hunchback of Notre Dame* and *Les Misérables* (miz-ur-AH-bl').

ANSWER: Victor(-Marie) Hugo

16. The real and imaginary parts of a function undergo this operation in the Cauchy-Riemann (koh-SHEE REE-mahn) equations, and this operation is used to find each entry in a Jacobian (juh-KOBE-ee-uhn) matrix. The directional type of this function is found by multiplying a unit vector times a gradient, and different iterations of these functions are multiplied by displacement and divided by factorials to find Taylor series. When this operation is used twice on a function, the result characterizes the concavity of the graph of that function. While this operation is often defined using a formula that involves the limit as  $h$  approaches zero, it in some cases it may be calculated with the power rule or the chain rule. Identify this operation from calculus that, for a function of one variable, gives the slope of the line tangent to the function at a given point.

ANSWER: differentiation [or taking the derivative; accept partial differentiation or taking partial derivatives before “directional”; do not accept “deriving”]

17. This psychologist compared his theories to Boyle’s Law and connected many of his theories to Edward Thorndike’s Law of Effect. He described yelling at a movie and similar communications without consequence as extended mands in a book that was strongly criticized by Noam Chomsky. This writer encouraged cultural engineering and behavior modification in his book *Beyond Freedom and Dignity*, and he wrote an influential article titled “Baby in a Box” which described an operant conditioning chamber. Name this radical behaviorist who wrote the novel *Walden Two*.

ANSWER: B(urrrhus) F(rederic) Skinner

18. The inertial guidance systems of aircraft are based on a hypothetical one of these devices named for Schuler, and the traditional seismograph contains one these to measure motion relative to the ground. A double one of these devices serves as a model of chaotic motion, and Benjamin Robins invented the ballistic type to find the velocities of projectiles. For the simple type of this device, sine theta is approximated as theta to determine small amplitude periods, and Galileo found that its period depends on length but not mass. Used by Foucault (foo-KOH) to demonstrate the rotation of the Earth, name this device that shows simple harmonic motion and can be made by hanging a weight from a string.

ANSWER: pendulum

19. This poet wrote of “My loved, my honored, much respected friend” in “The Cotter’s Saturday Night”, and the title character asks to be made an example of great and ample grace in his “Holy Willie’s Prayer”. He described one animal as an “ugly, creeping, blasted wonder” and another as a “small, sleek, cowering, timorous beast”; those lines appear in “To A Louse” and “To A Mouse”. In another work, this poet wrote that his love is like “A Red, Red Rose”. Name this poet best known for his adaptation of the Scottish folk song celebrating the end of the year, “Auld Lang Syne”.

ANSWER: Robert Burns

20. For many years, much of this country’s income came from the Sound Dues. This country went through the Easter Crisis of 1920 when its king deposed the government when it refused to call for an election on the status of the city of Flensburg. During World War Two, Georg Ferdinand Duckwitz warned that this country’s Jews were about to be deported, allowing most of them to be evacuated to Sweden. The king of this nation still rules over the now independent nations of Faroe (FAA-ro) Islands and Greenland, and from 1513 to 1972 this country alternated between kings named Frederick and Christian. Name this country which currently controls Northern Schleswig and the Jutland Peninsula in Northern Europe.

ANSWER: Denmark

**TB1.** This condition is necessary for the Casimir effect to hold, and dielectric constants are computed in comparison to this condition. Wormholes are solutions to the Einstein field equations under this condition, while radiation is the only form of heat exchange that can occur in one. This condition has the theoretically lowest possible index of refraction, and in the Magdeburg experiment the two halves of a metal sphere could not be separated when this was created inside the sphere. An approximation of this condition is used to freeze-dry food and generated with an air pump. Name this space that is empty of matter and which nature is said to abhor.

ANSWER: perfect vacuum [prompt on free space]

**TB2.** On the day after this holiday in some eastern European countries, men visit women and spank them, with the women giving a gift in return. This originally was a pagan holiday celebrating the birth of Tammuz, whose mother Semiramis claimed was Nimrod reborn. The council of Nicaea, using work by the Venerable Bede, set the date for this holiday, which is within a week after the first full moon after the spring equinox. This holiday begins the fifty-day period of Pentecost and ends the forty-day period of Lent. Identify this Christian holiday which commemorates the resurrection of Jesus.

ANSWER: Easter Sunday

**TB3.** Which animal...named Old Ben is hunted by Isaac and Lion in a William Faulkner story; appears on the flag of the state of California; and has black, grizzly, and polar species in the US?

ANSWER: bear