

2013 Collaborative Middle School Tournament

Round 9

Tossups

1. In this play, one character sends Reynoldo to spy on his son. The title character of this play mourns a "fellow of infinite jest," Yorick, in this play's "graveyard scene." The protagonist tells one character to "get thee to a nunnery" before he kills her father, (*) Polonius. That character later drowns and is named Ophelia. One famous scene from this play contains the line "To be or not to be." For 10 points, name this Shakespeare tragedy about the title Prince of Denmark.

ANSWER: Hamlet

2. This politician responded to Francois Barbe-Marbois in his *Notes on the State of Virginia*. This man founded the University of Virginia and designed the mansion of Monticello.. This president sent the Lewis and Clark expedition and authorized the (*) Louisiana Purchase. He was the principal author of the Declaration of Independence. For 10 points, name this third president of the United States.

ANSWER: Thomas Jefferson

3. This person from Gath defied the armies of Israel, demanding a fight to the death with one person under the condition that the winner's side would enslave the loser's side. He is finally challenged in the book of First Samuel Chapter 17 by the son of (*) Jesse, who was then a servant to Saul. For 10 points, name this large Philistine who is beheaded after being hit in the forehead by a stone from David's slingshot.

Answer: Goliath

4. In this state's capital, the Lane Avenue Bridge crosses the Olentangy River. Another of its cities contains historic Italian architecture in its Over-the-Rhine neighborhood, while another city, at the mouth of the Cuyahoga River, contains Case Western Reserve University. Much of its northern border is at Lake (*) Erie, and it is separated from Kentucky by its namesake river. For 10 points, name this state containing Cincinnati, Cleveland, and Columbus.

ANSWER: Ohio

5. One of these musical works features a harpsichord cadenza that was probably played by J.S. Bach at its premiere. Bela Bartok wrote one of these works for Orchestra. Vivaldi's hundreds of these works include *The Four Seasons*, and Mozart wrote a (*) double one for flute and harp. For 10 points, name this type of musical work in which a solo instrument is accompanied by an orchestra or other group of supporting instruments.

ANSWER: concerto [accept Brandenburg Concerto(s) before "Bela Bartok" is mentioned]

6. Darwin's first paper was on the formation of this biome, whose organisms are threatened by white-band disease. Acidification removes the minerals needed for this ecosystem to grow as each new generation builds on the calcium carbonate skeletons of the previous one. Constructed by tiny relatives of (*) jellyfish, about 10% of these have been bleached by global warming. For 10 points, name this most diverse aquatic ecosystem that includes the Great Barrier one.

ANSWER: coral reefs [prompt on "reef(s)"]

2013 CMST - Round 9

7. **This company's chief operating officer, who addressed issues facing working women in her book *Lean In*, is Sheryl Sandberg. While some people blamed its loss in value last year on Morgan Stanley, others blamed its CFO David Ebersman, who offered a lot of (*) shares at a high price during its May 2012 initial public offering.** For 10 points, identify this social media company, founded by Mark Zuckerberg, where users can share status updates with friends.

ANSWER: Facebook

8. **This dynasty ended after the rebellion of the peasant Li Zicheng. It gained power after the Battle of Lake Poyang, won by its first emperor, Hongwu, who had led the Red Turban Rebellion. During this dynasty, Matteo Ricci founded a Jesuit mission, and also during this dynasty were the Yung Lo-sponsored voyages of Zheng He.** (*) For 10 points, name this Chinese dynasty preceded by the Yuan, and followed by the Qing, which was known for its pottery.

ANSWER: Ming Dynasty [or Ming Chao]

9. **This system uses the Dalvik virtual machine, and specialized versions of it are used on the Nook and the Kindle Fire. Its version numbers are named in alphabetical order for desserts, such as Ice Cream Sandwich and Jelly Bean. Apps for it can be bought on the** (*) Play store. For 10 points, name this cell phone operating system that competes with iOS and is owned by Google.

ANSWER: Android

10. **The title character of this work is hired on as a burglar after unknowingly advertising for a job through a mark on his door. In this work, an attempt is made to reclaim family treasure and avenge the deaths of the villagers of Dale by a group of** (*) dwarves. The dwarves are aided by a wizard named Gandalf, and a less-obviously powerful character named Bilbo. For 10 points, name this novel written by J.R.R. Tolkien.

ANSWER: *The* Hobbit

11. **One of Maxwell's equations describes how this physical quantity produces a magnetic field. A diode allows it to flow in only one direction. It equals** (*) voltage over resistance according to Ohm's law, and comes in alternating and direct types. For 10 points, name this quantity whose units are amperes, and which measures the rate of charge flowing in a circuit.

ANSWER: electric current [accept direct current; prompt on "DC"]

12. **The extinction of this island's palm trees is discussed in Jared Diamond's book *Collapse*. Residents of this island created the rongorongo writing system and carried out rituals in the birdman cult. Platforms known as ahus on this island contain features made of volcanic tuff called** (*) moai. For 10 points, giant stone statues are found on what Pacific island named for a Christian holiday?

ANSWER: Easter Island [or Rapa Nui]

13. **A sports team from this city defeated the Calgary Stampeders in the 2012 Grey Cup. This city is the current home of major leaguers Adam Lind, Brett Lawrie, and Jose Bautista. Another sports team for this city features Landry Fields and** (*) Andrea Bargnani, but is probably better known for being the former team of Chris Bosh. For 10 points, name this Canadian city, home of the Raptors, Maple Leafs, and Blue Jays.

ANSWER: Toronto

14. **Two poems originally written in this language begin "Willow of crystal, a poplar of water" and "Tonight I can write the saddest lines;" the latter poem ends a collection that also includes twenty love poems. In a novel written in this language, the town of Macondo is founded by** (*) Jose Buendia. "Sunstone" and *One Hundred Years of Solitude* were written in, for 10 points, what language, used by Octavio Paz, Pablo Neruda, and Gabriel Garcia Marquez?

ANSWER: Spanish

2013 CMST - Round 9

15. **These phenomena are counted using the Wolf number, and butterfly diagrams show the concentration of these regions in latitude bands. Coronal loops and mass ejections generally originate from these regions. Though they are not eclipses, they possess an umbra and penumbra. These electromagnetic phenomena go through a variation cycle of about (*) 11 years. For 10 points, name these cooler areas on the Sun's photosphere that appear dark.**

ANSWER: sunspots

16. **An early invention used to make art works in this medium was the daguerreotype [duh-gayr-"row"- "type"]. Eadweard ["edward"] Muybridge created works in this medium which clarified the method by which horses gallop. *The Steerage* and *Migrant Mother* are specific examples of these types of art works. Works in this medium showing Yosemite National Park were created by (*) Ansel Adams. For 10 points, name these objects which can be instantly produced by Polaroids.**

ANSWER: photographs [accept word forms; prompt on "pictures"]

17. **One conflict in this country saw the Duke of Guise fight for the throne with two other men named Henry. This country signed the Evian Accords in 1962 with Algeria. In the 8th century, this was the site where Charles Martel was victorious at the Battle of Tours. This country was led by (*) Nicolas Sarkozy until the 2012 elections. For 10 points, name this country once led by Charles de Gaulle.**

ANSWER: France

18. **One method of performing this action involves using a base case and an induction step; another method begins by assuming the opposite and finding something impossible, which is the type "by contradiction". In 1994 Andrew Wiles did this for (*) Fermat's [fair-mah'z] Last Theorem. Basic geometry often uses the "two-column" variety of, for 10 points, what process of showing that a mathematical statement is true?**

ANSWER: mathematical proof [accept word forms]

19. **This novel's protagonist has a sister for whom he buys the record "Little Shirley Beans." The main character of this work loses the fencing team's equipment on the subway and has siblings named D.B, Allie, and Phoebe. That protagonist gets kicked out of (*) Pencey Prep, and walks around New York City complaining about the "phoniness" of the world. For 10 points, name this novel about Holden Caulfield by J.D. Salinger.**

ANSWER: The Catcher in the Rye

20. **In Norse mythology, the wolf Hati will devour this object at Ragnarok while Skoll will eat its sister. One goddess of this object put the shepherd Endymion in an eternal sleep and was the sister of Eos and Helios. Thoth's ibis bill represents the (*) crescent shape of this object. The Greek goddess Selene and the Roman goddess Luna were goddesses of, for 10 points, what nighttime celestial object?**

ANSWER: moon

Extra. **This work opens with the title item given as a gift by Drosselmeyer; it is later broken by Fritz. Spanish, Arabian, and Chinese dances in this ballet are said to represent different substances such as chocolate, coffee, and tea. The Waltz of the Snowflakes and Dance of the (*) Sugarplum Fairy appear in, for 10 points, what Peter Tchaikovsky ballet about Clara's Christmas gift coming to life?**

ANSWER: The Nutcracker [or Shchelkunchik]

2013 CMST - Round 9

Bonuses

1. For 10 points each, name these types of quadrilaterals:

[10] This type of quadrilateral has at least one pair of parallel sides.

ANSWER: **trapezoid**(s) [or **trapezium**(s)]

[10] The diagonals are each other's perpendicular bisectors in this type of quadrilateral, which has all four sides congruent.

ANSWER: **rhombus**(es) [accept **rhombi**; prompt on "diamond"]

[10] A rhombus that is also a rectangle is this figure, in which the diagonals create four isosceles right triangles.

ANSWER: **square**(s)

2. For 10 points each, identify the following about American paintings of women:

[10] James Whistler showed an older woman in profile in his most famous work, which is officially named *Arrangement in Grey and Black, No. 1*. The modestly-dressed woman in that work had this familial relation to Whistler.

ANSWER: she was his **mother** or **mom** [accept equivalents like **he was her son**]

[10] Andrew Wyeth created this painting of a polio-stricken woman in pink. It is set on a hill near some farmhouses, and is set in Cushing, Maine.

ANSWER: ***Christina's World***

[10] John Sargent's painting of Virginie Gautreau, titled *Madame X*, caused quite a bit of scandal when it was unveiled. Identify the color of Gautreau's revealing dress in *Madame X*.

ANSWER: **black** [do not accept or prompt on other answers]

3. Pronouns such as he or she, as opposed to him or her, can play this role in a sentence. For 10 points each:

[10] Name this part of the sentence contrasted with the predicate. When there is an action verb, this is the noun that performs the action.

ANSWER: **subject**

[10] Verbs in this form, typically ending in -ing but not participles, can be used in place of nouns, including as subjects in sentences.

ANSWER: **gerund**

[10] Languages such as Latin or German use this case for nouns used as subjects.

ANSWER: **nominative** [or **nominativus** or **nominative**]

4. The first Nobel Prize in Physics was given in 1901. For 10 points each:

[10] It went to Wilhelm [VIL-helm] Röntgen for his discovery of this type of radiation, which can be used to view bones.

ANSWER: **X**-rays [prompt on **electromagnetic** radiation or **electromagnetic** waves]

[10] Two years later, this married couple shared the prize with Henri Becquerel for their study of radiation.

ANSWER: Pierre and Marie **Curie** [or **Curies**; accept Maria (Salomea) **Skłodowska** [skwoh-DAWV-skuh]-Curie in place of "Marie Curie"]

[10] Marie Curie would later be awarded a Nobel Prize in Chemistry for discovering two elements. Name either of those elements.

ANSWER: **radium** or **polonium** [accept either; prompt on **Ra** or **Po**]

2013 CMST - Round 9

5. This artist collaborated with Pete Seeger on the album *We Shall Overcome*. For 10 points each:

[10] Name this New Jersey rocker, backed by the E Street Band, who sang "Glory Days" and "Dancing in the Dark" on his album *Born in the U.S.A.*

ANSWER: Bruce **Springsteen** [prompt on "The Boss"]

[10] Springsteen performed this Woody Guthrie song with Pete Seeger on the day of President Obama's inauguration. Lyrics in this song include "from the redwood forest/to the Gulf Stream waters".

ANSWER: **This Land is Your Land**

[10] This was Springsteen's third studio album. Tracks on this album include "Thunder Road", "Jungleland", and the title track where Springsteen sings that "In the day we sweat it out in the streets of a runaway American Dream".

ANSWER: **Born to Run**

6. Answer these questions about Germany during the 20th century, for 10 points each.

[10] This government of Germany between the two World Wars was named for the city where the Bauhaus art movement began. It was noted for high inflation, Expressionist art, and the rise of the Nazi party.

ANSWER: **Weimar** Republic

[10] Also known as Nazi Germany, this was the name given to Hitler's government that succeeded the Weimar Republic. The second part of this name means empire.

ANSWER: **Third Reich**

[10] This city was the capital of West Germany before the reunification.

ANSWER: **Bonn**

7. In 1997, NASA launched the Cassini-Huygens [HOY-gunz] space probe, which took seven years to reach its destination. For 10 points each:

[10] It went to this planet, the sixth one from the sun.

ANSWER: **Saturn**

[10] This is the largest moon orbiting Saturn. The Cassini probe has taken pictures of its shifting crust, which causes scientists to believe there may be water beneath it.

ANSWER: **Titan**

[10] The atmosphere of Titan is extremely dense with 98.4% of it composed of this gas, which is also the main constituent of Earth's atmosphere.

ANSWER: **nitrogen** [prompt on **N**]

8. There are "frost" and "fire" types of these creatures in Norse mythology. For 10 points each:

[10] Give the term for these particularly large and tall human figures, whose "frost" type came from Jotunheim. Jack encountered two of them at the top of the beanstalk.

ANSWER: **giants** [accept **jotunn**; accept fire **giants** or frost **giants**]

[10] This Norse trickster god was actually related to the giants, and fathered the wolf Fenrir with the giantess Angrboda. He was chained to a rock after he tricked Hodr into killing Baldr.

ANSWER: **Loki**

[10] Loki transformed into a female one of these animals that gave birth to an eight-legged one named Sleipnir.

ANSWER: **horses** [accept **stallions** or **mares**]

2013 CMST - Round 9

9. After seeing a signal in the old North Church, he was "ready to ... spread the alarm / through every Middlesex village and farm." For 10 points each:

[10] Name this man who carried out a "midnight ride" to warn colonists of attacking British soldiers.

ANSWER: Paul **Revere** [accept **Paul Revere's Ride** or The **Midnight Ride of Paul Revere**]

[10] "Paul Revere's Ride" was written by this man who also wrote a poem based on Indian legends, "The Song of Hiawatha."

ANSWER: Henry Wadsworth **Longfellow**

[10] Longfellow was one of the Fireside Poets along with this writer of "Old Ironsides" and "The Chambered Nautilus". This poet's son became a Supreme Court justice.

ANSWER: Oliver Wendell **Holmes, Sr.**

10. Name some things about how a case gets to the Supreme Court, for 10 points each.

[10] The Supreme Court only hears cases of this type. Contrasted with a criminal case, it involves a plaintiff and a defendant.

ANSWER: **civil** suit

[10] In order to have an existing case go to the Supreme Court, one side in the case must do this. It means to ask a higher court to take the case.

ANSWER: **appeal** [accept word forms]

[10] If the Supreme Court consents to hear the case, it issues one of these "of certiorari [ser-shah-rair-eye]". One of these "of habeas corpus" requires a defendant to be physically brought to court.

ANSWER: **writ** [accept **writ of certiorari** or **writ of habeas corpus**]

11. In this opera, Radamès is loved by Amneris, daughter of the Pharaoh, but it ends with the song "Almighty Ptah" as the title character, an Ethiopian princess, dies in Radamès' arms. For 10 points each:

[10] Name this 1871 opera.

ANSWER: **Aida**

[10] This composer of *Rigoletto* and *La Traviata* composed *Aida*.

ANSWER: Giuseppe **Verdi**

[10] *Aida* is set during an Old Kingdom dynasty in this ancient African civilization.

ANSWER: **Egypt**

12. The poison cyanide disrupts the process of cell respiration in this organelle. For 10 points each:

[10] Name this "powerhouse" of the cell, where the chemical energy in food is released.

ANSWER: **mitochondria** [or **mitochondrion**]

[10] The mitochondria generates about 38 of these high-energy molecules for each glucose sugar that enters respiration. These molecules can be used to power other reactions in the cell.

ANSWER: **ATP** [or **adenosine triphosphate**]

[10] The energy from ATP often is released when it loses a phosphate ion through this decomposition process involving the addition of water.

ANSWER: **hydrolysis** [accept word forms]

13. He was assassinated by Nathuram Godse in 1948. For 10 points each:

[10] Name this "Great Soul Warrior" who led the independence movement of India.

ANSWER: Mohandas [Karamchand] **Gandhi** [or Mahatma **Gandhi**]

[10] Gandhi also led a 1930 march to Dandi to protest a tax on this substance.

ANSWER: **salt**

[10] Gandhi was a member of this religion, which was one of two major religions in India before the partition besides Islam.

ANSWER: **Hinduism**

2013 CMST - Round 9

14. In this book, Fern asks, "Where is Papa going with that ax?" For 10 points each:

[10] Name this book where the title spider writes "SOME PIG" and "HUMBLE" in an effort to save Wilbur.

ANSWER: Charlotte's Web

[10] Charlotte's Web was written by this man. He also wrote about a voiceless bird who uses his musical talents to woo Serena in *The Trumpet of the Swan*.

ANSWER: E(lwyn) B(rooks) White

[10] This book by E.B. White is about the adventures of a small mouse. When the protagonist's bird friend Margalo flies north, the protagonist goes after her in a toy car with a real engine.

ANSWER: Stuart Little

15. Thaddeus Stevens lead a "Radical" wing of this party during Reconstruction. For 10 points each:

[10] Name this political party that won the Presidency in 1860 when Abraham Lincoln won office.

ANSWER: Republican party [or Republicans; or GOP; or Grand Old Party]

[10] This Republican won the Presidency in 1880 over Winfield Scott Hancock. Charles Guiteau shot him and he died in July 1881.

ANSWER: James Abram Garfield

[10] This politician led the Half-Breed faction of the Republican party. During the 1884 campaign, he was called the "notorious liar from the state of Maine."

ANSWER: James Gillespie Blaine

16. This Bible book includes the story of the creation. For 10 points each,

[10] Name this first book of the Bible, which includes figures such as Adam and Eve.

ANSWER: Book of Genesis

[10] This character from Genesis cursed his son Ham for seeing him drunken and naked, but is probably more famous for being commanded to build an ark to escape a great flood.

ANSWER: Noah [accept Noach]

[10] This tower was intended to reach to heaven. God stopped the construction of this tower by confusing the tongues of its builders and dispersing all people throughout the world.

ANSWER: Tower of Babel

17. "All animals are equal, but some animals are more equal than others" is a slogan used in this book. For 10 points each:

[10] Name this novella in which the pigs Napoleon and Snowball fight for leadership of the title estate.

ANSWER: Animal Farm

[10] This English author wrote *Animal Farm* and a dystopian novel set in Oceania, *Nineteen Eighty-Four*.

ANSWER: George Orwell [or Eric Arthur Blair]

[10] This character, who has a varicose ulcer above his right ankle, is the protagonist of *Nineteen Eighty-Four*. He falls in love with Julia and is tortured by O'Brien in Room 101.

ANSWER: Winston Smith [accept either underlined part]

18. Paper and pencil ready. Evaluate and fully simplify the following expressions that have exponents, for 10 points each:

[10] Raise the fraction one-half to the third power.

ANSWER: 1/8 [or 0.125]

[10] Divide 5 raised to the two-thirds power by 5 raised to the negative four-thirds power.

ANSWER: 25

[10] Raise 8 to the negative five thirds power.

ANSWER: 1/32 [or 0.03125]

2013 CMST - Round 9

19. In 2012, this leader insisted his nation's development of nuclear technology was for peaceful purposes, and not for weapons. For 10 points each:

[10] Identify this man, the 6th and current President of the Islamic Republic of Iran.

ANSWER: Mahmoud **Ahmadinejad**

[10] Prior to becoming President of Iran, Ahmadinejad served as the mayor of this Iranian capital for two years.

ANSWER: **Tehran**

[10] In September 2012, Ahmadinejad made his last address to this governing body of the United Nations, where he called for a new world order, not dominated by Western powers in "service of the devil."

ANSWER: The **General Assembly** of the United Nations

20. Name these bays, for 10 points each.

[10] Alcatraz Island is located in this bay, whose entrance is known as the "Golden Gate."

ANSWER: **San Francisco** Bay

[10] :This bay is the largest estuary in the United States and is named for the Algonquin word for a "village at a big river". It is well known for its fishing industry, especially for blue crabs.

ANSWER: **Chesapeake** Bay

[10] This is Florida's largest open-water estuary and is home to the namesake teams the "Buccaneers", "Rays", and "Lightning".

ANSWER: **Tampa** Bay

Extra. This country in the Middle East consists of seven different cities. For 10 points each:

[10] Identify this country, abbreviated UAE.

ANSWER: **United Arab Emirates** [or al-**Imarat al-Arabiyah al-Muttahidah**]

[10] This is the largest city in the UAE and has become known in recent years as a hub of tourism. It is home to the tallest building in the world, the Burj Khalifa.

ANSWER: **Dubai** [do not accept Abu Dhabi]

[10] The United Arab Emirates borders Saudi Arabia and this other country to its east that has its capital at Muscat.

ANSWER: Sultanate of **Oman** [or Sultanat **Uman**]