

# 2013 Collaborative Middle School Tournament

## Round 2

### Tossups

1. **This author wrote a story in which the inhabitants of Lagash experience darkness for the first time. Along with "Nightfall," this author wrote a series of novels featuring the investigative interactions of Elijah Baley and R. Daneel Olivaw. Hari Seldon invents the science of psychohistory in this author's novel (\*) *Foundation*.** For 10 points, name this Russian-American science fiction writer who depicted the Three Laws of Robotics in his collection, *I, Robot*.

ANSWER: Isaac Asimov [or Isaak Yudovich Ozimov]

2. **Combustion reactions produce carbon dioxide, energy, and this substance. Sometimes called the "universal solvent", it has high surface tension because it forms many hydrogen bonds. This compound is unusual in that as it is cooled, it becomes *less* dense, so its solid form (\*) floats on top of its liquid form.** For 10 points, name this compound that boils at 100 degrees Celsius, freezes at zero degrees Celsius, and has formula H<sub>2</sub>O.

ANSWER: water [or H<sub>2</sub>O before it is mentioned]

3. **These figures sent the dragon Campe to guard their more monstrous brothers in Tartarus. After losing a war in which he led these gods, Atlas was forced to lift the sky on his shoulders. Though he was one of them, (\*) Prometheus left their side and joined with Zeus, who was the son of two of these gods named Rhea and Cronus.** For 10 points, name these gods who preceded and fought a war with the Olympians.

ANSWER: Titans

4. **J.M.W. Turner painted one of these things before it was to be "broken up" in his *The Fighting Temeraire*. A black man stands in a small brown one of these things in a Winslow Homer painting. A John Copley painting showing many of these includes a group of people on one of them as Brook Watson is being rescued from a (\*) shark attack.** For 10 points, name these sea vessels which are often shown in naval war scenes.

ANSWER: boats or ships [accept warships; accept sea vessels before it is mentioned]

5. **During this battle, Senlac Hill was the site of a defensive position set up by housecarls. The losing side's forces had been weakened in a previous battle against Harold Hardrada at Stamford Bridge. The winning side's commander claimed to be the rightful successor to Edward the Confessor. King (\*) Harold Godwinson was killed during this battle.** For 10 points, name this 1066 battle in which William of Normandy conquered England.

ANSWER: Battle of Hastings

6. **Channels that carry ions made of this element are blocked by some hypertension medications. Ions of this element and magnesium are concentrated in hard water, while its sulfate forms gypsum. Antacids use its carbonate, which forms (\*) limestone.** For 10 points, name this element found in dairy products that is used by the body to form teeth and bone structures, represented by the symbol Ca [C A].

ANSWER: calcium [prompt on "Ca" before it is mentioned]

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7. One author from this country wrote about a character named "You" who searches for the title location of the novel *Soul Mountain*. In another novel set in this nation, three friends swear allegiance to one another in the Oath of the Peach Garden. That novel, (\*) *Romance of the Three Kingdoms*, is one of the Four Great Classics of this country. For 10 points, name this country where Shi Naian's *Water Margin* is set during the Song Dynasty.

ANSWER: People's Republic of China

8. Resignations of the President or Vice-President must be delivered to this person. Madeleine Albright was the first woman to hold this position, and one candidate for this position in the second Obama administration withdrew her candidacy due to controversy over the (\*) Benghazi attacks. Susan Rice was a potential nominee for, for 10 points, what cabinet post dealing with diplomacy and foreign affairs held by John Kerry?

ANSWER: Secretary of State

9. This politician claimed that he went into politics because of Ayn Rand and made *Atlas Shrugged* required reading for his staff, but he later said he rejected Rand's atheism. He is the current chair of the House Budget Committee, and one of his budget proposals was titled (\*) "The Path to Prosperity." For 10 points what Wisconsin Republican was Mitt Romney's Vice Presidential nominee in the 2012 election?

ANSWER: Paul Ryan

10. William Hale Thompson was mayor of this city where the death of Mathias J. Degan led to the execution of August Spies. In addition to that event near the McCormick factory, an event in this city saw Pigasus the Pig nominated for President by people like Jerry Rubin and Abbie Hoffman. This city was the site of the Haymarket Square Riot and the 1968 Democratic National Convention. (\*) For 10 points, name this Illinois city governed by two mayors named Daley and currently by Rahm Emanuel.

ANSWER: Chicago, Illinois

11. One of the title characters in this story tells his father he is looking back at his white cat sitting on the roof. In this story, the stepmother plans to leave the title characters in the forest. This ends with the title characters going home after shoving an old (\*) woman in an oven. For 10 points, name this Brothers Grimm story about siblings who find a house made of bread, cake, and sugar.

ANSWER: "Hansel and Gretel" [or "Hansel und Gretel"]

12. One show on this television channel features Little Suzy and the title character's mother, named Bunny. In addition to *Johnny Bravo*, one of this channel's shows included such characters as Mandark and Dee-Dee, who bothered her brother. (\*) For 10 points, name this television channel that aired such shows as *Dexter's Laboratory* and *The Powerpuff Girls* but is now better known for airing *Regular Show* and *Adventure Time*.

ANSWER: Cartoon Network [accept Boomerang before "Mandark" is read]

13. The difference quotient calculates this value for a secant, and the derivative is this for a tangent line. The product of these quantities for perpendicular lines is negative one. This is undefined for (\*) vertical lines, and for horizontal lines it is zero. It can be calculated as  $\Delta y$  over  $\Delta x$ . For 10 points, name this quantity which is represented by  $m$  in the equation  $y = mx + b$  and measures the steepness of a line.

ANSWER: slope

14. A revolution in this country was led by the Katipunan and was sparked by the execution of Jose Rizal. One of its presidents, Ferdinand Marcos, was blamed for the assassination of Benigno Aquino, whose widow Corazon became president. (\*) For 10 points, name this island nation, the site of the World War II Battle of Leyte Gulf and the Spanish-American War Battle of Manila Bay.

ANSWER: Republic of the Philippines

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15. Temples dedicated to this god include the Trimbakeshwar and Ramanaswathamy. Five is a sacred number to this god, which is reflected in his namesake "Five Mantras". His sons are Kartikeya and Ganesha. Although he's not Vishnu, this god has a number of avatars, and his wife is (\*) Parvati. For 10 points, name this Hindu god which, along with Brahma and Vishnu, makes up the Hindu trimurti, a "destroyer" god.

ANSWER: Shiva [accept Shiva the Destroyer, Shiva the Transformer]

16. The density parameter for the non-relativistic form of this falls off with the cube of the scale factor. This substance dominated the universe from approximately 75,000 years after the Big-Bang until about 4 billion years ago. Deviations in the expected orbital speed of galaxies suggests the presence of the (\*) "dark" form of this. When it has the same mass but opposite charge and spin, it is deemed "anti." Solid, liquid, and gas are three states of, for 10 points, what term for any substance that occupies space and has mass.

ANSWER: matter

17. The University of Breslau gave this composer of 21 *Hungarian Dances* an honorary doctorate degree; he returned the favor by composing the *Academic Festival Overture*. One of his works replaces the Latin text with verses from the Lutheran Bible, and his 1st Symphony is so heavily inspired by (\*) Beethoven that it's often called "Beethoven's Tenth." For 10 points, name this composer of *A German Requiem* and a children's lullaby.

ANSWER: Johannes Brahms

<Matthew Hill>

18. This state is home to a Robert Smithson-designed earthwork sculpture titled *Spiral Jetty*. Sandstone landforms such as the Fiery Furnace and the Organ can be found in this state's Arches National Park. The (\*) transcontinental railroad was officially completed in Promontory Summit in this state. Its capital hosted the 2002 Winter Olympics. For 10 points, name this Western state that contains the Great Salt Lake.

ANSWER: Utah

19. In this book, the French general Montcalm shows one character a letter from General Webb, which prompt ons a long march during which a massacre occurs. The beginning of this novel sees Colonel Munro's two daughters being escorted to Fort William Henry. The evil Magua kills Uncas and Cora only to be shot later by (\*) Natty Bumppo in this work. For 10 points, what second novel of James Fenimore Cooper's *Leatherstocking Tales* is titled for the sole survivor of a Native American tribe?

ANSWER: *The Last of the Mohicans*

20. Variations in this organism's *foraging* gene results in rover and sitter behavior types, while homeotic gene mutations can cause legs to grow from its head. Salivary gland chromosomes are often extracted from its larvae, and T. H. Morgan first discovered sex-linked traits by studying its white-eyed mutant. (\*) For 10 points, name this insect model organism of genetics with recessive traits like vestigial wings and ebony body.

ANSWER: Drosophila melanogaster [or fruit fly/ies; or Drosophila melanogaster; prompt on "fly/ies"]

Extra. This country was headed by Kurt Waldheim after he was UN Secretary-General. Waldheim was controversial because after the Anschluss uniting this country with (\*) Germany, he joined a group affiliated with the Nazis. It hosted the 1964 and 1976 Winter Olympics at Innsbruck, and it is on the eastern border of Liechtenstein. For 10 points, name this country whose capital is Vienna.

ANSWER: Austria

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### Bonuses

1. Answer some questions related to campaign spending, for 10 points each.

[10] Spending on campaigns attempts to influence the outcome of these events. Broadly speaking, they happen when citizens vote for particular candidates in a race.

ANSWER: elections

[10] The 2012 elections saw increased campaign spending by this type of group. They can accept unlimited donations from political donors, and do not have to disclose who donated money to them.

ANSWER: Super PACs [prompt on "PACs" or "political action committees"]

[10] This Arizona senator created a campaign-finance reform law with Russ Feingold. He ran against Barack Obama for President in 2008.

ANSWER: John McCain [accept McCain-Feingold Act]

2. Current shows on this channel include the ballet-centered *Bunheads*. For 10 points each:

[10] Name this channel better known for shows like *The Secret Life* and *Pretty Little Liars*. This channel is the teen-centered offshoot of the network behind *Modern Family* and *Dancing With The Stars*.

ANSWER: ABC Family [do not accept or prompt on "ABC"]

[10] Other shows that aired on ABC Family including this one centered around Kat and Bianca Stratford. This show is based on a 1999 film of the same name, which was in turn based on Shakespeare's *Taming Of The Shrew*.

ANSWER: 10 Things I Hate About You

[10] In the film version of *10 Things I Hate About You*, this actor played Cameron, the love interest of Larisa Oleyunik's Bianca. The actor's more recent roles include a younger version of Bruce Willis' character in 2012's *Looper*.

ANSWER: Joseph Gordon-Levitt

3. A set is an unordered collection of elements. For 10 points each:

[10] This type of diagram is often used to show relationships between several sets. Similar to Euler [OY-lur] diagrams, they are named after the English mathematician who introduced them.

ANSWER: Venn diagrams

[10] If *A* and *B* are sets, this operation gives the set of elements that are in both *A* and *B*.

ANSWER: *A* intersection *B* [accept the intersection of *A* and *B* or similar answers that contain word forms of intersection]

[10] This is the name for the number of elements in a finite set.

ANSWER: cardinality [accept order]

4. The Margaret Edwards Award is given to an author for contributions to Young Adult Literature. For 10 points each:

[10] The later works of this first recipient included *Tex*, *That Was Then This Is Now*, and *Rumble Fish*, but none of them earned as much acclaim as her first novel, *The Outsiders*, written when she was a teenager.

ANSWER: S.E. Hinton

[10] This 2007 Margaret Edwards Award recipient wrote the chilling tale *The Giver*, as well as the award-winning *Number the Stars*.

ANSWER: Lois Lowry

[10] This 2012 Edwards recipient wrote the classic fantasy *The Dark is Rising* sequence, which featured the books *The Grey King*, *Greenwitch*, and *Silver on the Tree*.

ANSWER: Susan Cooper

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5. Answer the following about different kinds of musical notation, for 10 points each.

[10] A slanted pound sign indicates this type of note, raised a half tone from the natural pitch, contrasted with flat notes.

ANSWER: **sharp** [accept additional information]

[10] This notation in the shape of a birdseye indicates that the note should be held longer than usual, though it's up to the performer or conductor to decide just how long.

ANSWER: **fermata** [prompt on "hold"]

[10] The staff only has five lines; this type of line extends the staff above or below for pitches outside the staff.

ANSWER: **ledger** line(s)

6. Because they cannot reproduce, mules and zebroids are not true examples of these. For 10 points each:

[10] Name this term for a population whose members can interbreed and produce fertile offspring. Charles Darwin wrote a work entitled *On the Origin of* these.

ANSWER: **species** [accept (*On*) the **Origin of Species** (*by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life*)]

[10] Darwin argued that most species evolved by this process, in which individuals with the best adaptations survive longer and leave more offspring.

ANSWER: **natural selection** [accept word forms; prompt on "selection"; prompt on "survival of the fittest"]

[10] Sharks and dolphins, which share many adaptations but are not closely related, are a result of this type of evolution.

ANSWER: **convergent** evolution [accept word forms]

7. This war began when Serbian assassin Gavrilo Princip shot an heir to the Austro-Hungarian throne.

[10] Name this war that began in 1914 between the Triple Entente and the Central Powers.

ANSWER: **World War I** [accept **First World** War; accept **Great** War]

[10] What nephew of Franz Josef was killed in that attack?

ANSWER: Archduke **Franz Ferdinand** [or **Francis Ferdinand**; prompt on partial answer]

[10] Franz Ferdinand was killed in this city, which is now the capital of Bosnia.

ANSWER: **Sarajevo**

8. This holiday takes up the ninth month of the Islamic calendar. For 10 points each:

[10] Name this Islamic holiday, whose participants partake in the Iftar every night at sunset.

ANSWER: **Ramadan**

[10] The Iftar breaks this period, which participants in Ramadan are expected to partake in from dawn to sunset. Exemptions for this action include those who are traveling and breastfeeding women.

ANSWER: **Sawm** [accept **fasting**]

[10] Along with Sawm, participants in Ramadan are also expected to uphold this pillar of Islam, which requires Muslims to partake in formal worship. Normally, this practice is done five times per day.

ANSWER: **Salat** [accept **Salah** and **Salawat**]

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9. For 10 points each, name these stars visible in the northern hemisphere.

[10] The brightest star visible from Earth other than the Sun, this is actually a binary system known as Alpha Canis Majoris or—colloquially—the "dog star".

ANSWER: Sirius ["serious"]

[10] With an apparent magnitude near 2.00, Alpha Ursae Minoris gets this better known name from its location in the earth's sky.

ANSWER: Polaris or the north star

[10] In about 1000 years, Polaris will have moved farther away from celestial north and this one, the third brightest in its constellation, will become the new north star.

ANSWER: Gamma Cephei [or Erral or Alral]

10. This novel is set in Maycomb, Alabama. For 10 points each:

[10] Name this novel narrated by Scout Finch, whose father Atticus is a lawyer.

ANSWER: To Kill a Mockingbird

[10] *To Kill a Mockingbird* was the only novel written by this author.

ANSWER: Harper Lee

[10] Harper Lee was a childhood friend of this writer of *In Cold Blood* and *Breakfast at Tiffany's*.

ANSWER: Truman Capote

11. Parmigianino [PAR-mih-jah-NEE-noh] painted this figure with a characteristically long neck in one painting. For 10 points each:

[10] Identify this Biblical figure who also wears a red shirt and blue sash in a painting in which John the Baptist holds a goldfinch. This figure holds a dead body in many versions of the *Pietà*.

ANSWER: Madonna [or the Virgin Mary; or the Virgin Mary; or Maryam]

[10] The aforementioned *Madonna of the Goldfinch* is a painting by this Renaissance master, who also painted *The School of Athens*.

ANSWER: Raphael Santi [accept either underlined answer; accept Raphaello Sanzio da Urbino]

[10] Another Renaissance master who painted the Madonna was this man, who painted the *Madonna of the Rocks*.

He depicted Christ with his disciples in *The Last Supper*, and created a drawing of the Vitruvian Man.

ANSWER: Leonardo da Vinci [accept either underlined portion]

12. The largest public square in this city is the Place de la Concorde, which is at one end of the Champs-Elysees. For 10 points each:

[10] Name this capital of France.

ANSWER: Paris

[10] The other end of the Place de la Concorde is at the Place Charles de Gaulle, which contains this monument to the French Revolutionary and Napoleonic Wars.

ANSWER: Arc de Triomphe de l'Etoile [or Triumphal Arch]

[10] This river divides Paris into its Left Bank and Right Bank, with the Ile de la Cite in its center.

ANSWER: Seine

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13. For 10 points each, name these figures associated with Greek drama.

[10] It was foretold that this man would kill his father and marry his mother. He became king of Thebes after solving a riddle and is the namesake of a Freudian complex.

ANSWER: Oedipus

[10] Oedipus freed Thebes from this creature by answering its riddle. They are often depicted with the body of a lion and the head of a human.

ANSWER: Sphinx

[10] This Greek playwright wrote about Jocasta and Oedipus in *Oedipus Rex* and about Oedipus' daughter in *Antigone*.

ANSWER: Sophocles

14. Identify these cabinet-level positions in the US government. For 10 points each:

[10] This position is held by the head of the Department of Justice. During the Obama Administration, it has been held by Eric Holder.

ANSWER: Attorney General

[10] This financial position was held by Tim Geithner during Obama's first term and is now held by Jack Lew.

ANSWER: Secretary of the Treasury [or Treasury Secretary]

[10] In February 2013, Obama nominated the CEO of REI, Sally Jewell, to hold this position, replacing Ken Salazar.

ANSWER: Secretary of the Interior [or Interior Secretary]

15. 1905 is sometimes referred to as this scientist's "annus mirabilis", or "miracle year", because he finished several important papers during that year. For 10 points each:

[10] Name this scientist who described the relation between rest mass and energy using the formula  $E = mc^2$  ["E equals m c squared"].

ANSWER: Albert Einstein

[10] When Einstein was later awarded the Nobel Prize, he was cited for explaining this effect, in which light hitting a metal can cause the release of electrons.

ANSWER: photoelectric effect

[10] In explaining the photoelectric effect, Einstein used this constant that had been developed to explain blackbody radiation and is represented with a lowercase  $h$ .

ANSWER: Planck's constant

16. Name these people assassinated during the Civil Rights movement, for 10 points each:

[10] This man delivered the "I Have a Dream" speech and was shot by James Earl Ray while supporting a strike in Memphis, Tennessee.

ANSWER: Martin Luther King, Jr. [or MLK]

[10] 2 months after addressing a crowd in Indianapolis about King's death, this brother of John F. Kennedy was shot by Sirhan Sirhan.

ANSWER: Robert F. Kennedy [or RFK; prompt on "Kennedy"]

[10] This man was the NAACP field secretary in Mississippi and was shot by Byron de la Beckwith in 1963.

ANSWER: Medgar Wiley Evers

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17. The title character in this novel goes to sea despite his parents' wishes that he become a lawyer. For 10 points each:

[10] Name this novel about a man who after being shipwrecked spends 28 years on a place he names the Island of Despair.

ANSWER: **Robinson Crusoe**

[10] Robinson Crusoe was written by this English author of *Moll Flanders*.

ANSWER: Daniel **Defoe**

[10] This Scottish author used island settings in *Kidnapped* and *Treasure Island*.

ANSWER: Robert Louis **Stevenson**

18. Paper and pencil ready. Consider the following relations between numbers, for 10 points each:

[10] What is the Greatest Common Divisor (GCD) of 63 and 56?

ANSWER: **7**

[10] What is the Least Common Multiple (LCM) of 48 and 36?

ANSWER: **144**

[10] What is the product of the GCD and LCM of 100 and 130?

ANSWER **13000**

19. This 1274 BCE battle was most likely the largest chariot battle ever fought although the winner is uncertain since both sides claimed victory. For 10 points each:

[10] Name this battle between Egypt and the Hittite forces of Muwatalli.

ANSWER: Battle of **Kadesh**

[10] This son of Seti I celebrated 14 sed festivals and was Pharaoh during the battle of Kadesh. Popular portrayals of the Book of Exodus often include him, though there is little historical evidence that those portrayals are correct.

ANSWER: **Ramses II** [accept **Ramses the Great**; prompt on "Ramses"]

[10] Ramses the Great was a pharaoh of the 19th Dynasty of Egypt, during this period of Egyptian history, which saw such rulers as Thutmose III and Akhenaten. It is contrasted with the Old and Middle Kingdoms.

ANSWER: **New Kingdom**

20. He was invited to dine with the gods but stole ambrosia and nectar from the feast. For 10 points each:

[10] Name this king who was punished with eternal hunger and thirst for serving his son to the gods when they came to dine with him.

ANSWER: **Tantalus**

[10] This was the son that Tantalus killed and served to the Olympians. He was brought back to life with a missing shoulder blade, which was later replaced with one made of ivory.

ANSWER: **Pelops**

[10] Tantalus was a son of this Greek god of lightning. This father of Heracles and Perseus was married to Hera..

ANSWER: **Zeus** [do not accept "Jupiter"]

Extra. One of the most successful fantasy series in children's literature involves two brothers and two sisters who are transported to another world in an unusual way, their uncle's wardrobe. For ten points each:

[10] Name the author of the famous *The Chronicles of Narnia* series, the first of which was *The Lion, the Witch, and the Wardrobe*, published in 1950.

ANSWER: C(live) S(taples) **Lewis**

[10] Of the seven books in *The Chronicles of Narnia*, this was the 6th book published, though it outlines the creation of the realm of Narnia, 1000 years prior to the setting of *The Lion, the Witch, and the Wardrobe*.

ANSWER: *The* **Magician's Nephew**

[10] Identify the only character to appear in all 7 books. He was the son of the Emperor-over-the-Sea and his name is Turkish for lion.

ANSWER: **Aslan**