

FROSHMORE CHAMPIONSHIPS

Round One

Read only for Round One

Officials Checklist and reminders:

- 1.) Review this checklist and reminders document and the rules flow chart. _____
- 2.) Pencils and fresh scratch paper for each participant _____
- 3.) Timer instructions _____
- 4.) Identify the head coach for each team. _____
- 5.) Identify the team captain. _____
- 6.) Review the pumpnickel rule _____

Accept only the answer to the bonus question that comes from the captain.

The captain may defer to another team member to give the answer to the bonus question.

If you want them to indicate a deferral in a specific way – tell them at the beginning of the match. “If you are going to defer on a bonus question, please do so by”

Coaches may use an ipad or table to keep score (I've sent out an excel score sheet) They may not use their ipad, phone or other technology to look up answers, send or received text messages or emails or to make calls during competition.

Before you begin, remind students that on a toss-up question they must buzz-in and be recognized before giving the answer and that they may NOT confer on a toss-up. You may only confer on a bonus question.”

When you read a toss-up question – identify the subject, then read the question.

If the team member buzzes-in before the question is completed and the answer is incorrect, say ‘incorrect, I will finish the question’ then finish reading the question.

If you have finished reading the question when the first team buzzes-in and gives an incorrect response say ‘incorrect,’ look at the second team call them by team name and say ‘_____ I have finished the question’

If the time has expired, their response should be to immediately buzz-in to be recognized. If there is still time (5 seconds for a regular question 15 on a math computation) they have the remaining time to buzz.

If the toss-up question is not answered correctly by either team, give the correct answer. Do NOT read the bonus question, go on to the next toss-up. **If you need a replacement question for this subject,**

you may use the unused bonus.

The first time you read a bonus question for each team say ‘Here is your bonus question, you do not need to buzz-in. Remember you may confer on this question, and I will take the answer from the team captain.’

There is NOT a penalty for buzzing during a bonus question.

When the time for conferring has expired (10 seconds – 15 on math or science computation) **call for the answer.** Say, ‘Captain?’ or ‘answer please’ (or something similar). If they do not give you an immediate answer say ‘time’ and give the correct answer.

There is no limit to the number of team members a team substitutes.

On a toss-up question, do not give the correct response until you have given both teams an opportunity to answer the question.

Leading articles such as “the,” “an,” and “a” are not required (e.g., Tale of Two Cities is an acceptable answer for The Tale of Two Cities). However, if an article is given, it must be the correct one.

Plural/Singular answers are acceptable unless otherwise delineated.

Last names are acceptable, except where there is more than one common person in the same field.

Prompt for more information by saying – ‘more’ or ‘more specific’.

Questions requiring additional computation time (15 seconds) have computation in the subject line - MATH COMPUTATION: or SCIENCE COMPUTATION: or BONUS COMPUTATION: (If it needs it and we forgot it, add it!)

Math or Science questions that do not require computation and receive regular question time (5 for toss-up and 10 for bonus) do not have computation in the subject line - MATH: or SCIENCE: or BONUS

Explain the addition of the word Computation to the timer and the team at the beginning of the tournament. After the first question containing COMPUTATION: You may choose to say only Computation if you wish.

Give your stall count before the game starts. A stall count is the amount of time allowed for the student to begin their answer once you've called on them. "My stall count is _ _ _." Fill in the blanks with your count. Do you count 1, 2, stall? 1, 2, 3, stall? Do you say stall on the upbeat of the 3rd second or the downbeat? My preference is you count 1(1001), 2(1002), 3(1003) with stall being called on the downbeat of 3. (Down beat being the end of the 1003 with 100stall. You do not have to say the 1000 or the second 1, 2 or 3 out loud. You do need to make some type of physical indication - head nod, hand count (like a basketball referee counting the backcourt) even a foot tap. But do something so the student can see the seconds slipping away. This also helps with consistency. Neither team can say the other team received more time before a stall was called. When an immediate answer is expected 1 second is adequate time to allow before a stall is called.

"Welcome to Round One of the tournament. I am _____, your moderator. (if you have a judge, timer and scorekeeper, introduce them as well) Our two teams are _____ and _____. Head coaches, will you please stand. A protest may be lodged only by the head coach." (run a buzzer check) "Students, remember, you may not give an answer until you are recognized. If you do so, it will be ruled as an incorrect response, even if your answer is correct. Explain the timing for Math or Science Computation: (see instructions) Good sportsmanship is expected from **all** players, substitutes, coaches, spectators and parents. Except for using the excel spreadsheet to keep score, you may not use computers, smart phones, iPad, etc. during the competition. Turn off all and put away all electronics at this time. (pause) Are there any questions? Let's begin."

- _____ 1. MATHEMATICS COMPUTATION: What is the 60th term of the arithmetic sequence starting with 2, 6, 10?

ANSWER: **238**

- BONUS BONUS COMPUTATION: What is sum of the first 60 terms of this arithmetic series starting with 2 and ending with 238?

ANSWER: **7200**

- _____ 2. SCIENCE: **This GPU microarchitecture associated with Nvidia's GeForce 40 series*** was announced in September 2022. It shares its name with the daughter of the poet Lord Byron, who wrote an algorithm for the machine known as the "analytical engine" that is considered to be one of the first computer programs. What is this name?

ANSWER: (Ada) **Lovelace** [note: she was Augusta Ada King (*née* Byron), Countess of Lovelace]

- BONUS BONUS: The analytical engine was developed by this English mathematician and engineer but was never built. Who was this polymath?

ANSWER: (Charles) **Babbage**

- _____ 3. SOCIAL STUDIES: **The Death of Hu Yaobang was one of the catalysts for this event. Jeff Widener took the * "Tank Man" photograph during this event. What is this event, in which student protestors were massacred by the People's Liberation Army in Beijing?**

ANSWER: **Tiananmen Square** (Massacre) [accept obvious equivalents for "Massacre"]

- BONUS BONUS: What reformist politician was the leader of China during the Tiananmen Square Massacre?

ANSWER: **Deng** (Xiaoping) [accept names in either order, but Deng is required]

- _____ 4. FINE ARTS: **A patter song in this opera is preceded by the song "Hold, Monsters!" The main character of this opera returns to servitude because he has not yet had his 21st birthday *** being born in a leap year. What is this Gilbert and Sullivan opera which includes the "Major General" song?

ANSWER: **Pirates of Penzance**

- BONUS BONUS: What other Gilbert and Sullivan opera has the character Nanki-Poo and is set in Japan?

ANSWER: **The Mikado**

_____ 5. MATHEMATICS: If two angles of a triangle are each 42 degrees, what two words describe this triangle?

ANSWER: **Obtuse and Isosceles.**

BONUS BONUS: A polygon has twelve congruent sides and all angles are also congruent. What two words describe this polygon?

ANSWER: **Regular Dodecagon**

_____ 6. SOCIAL STUDIES: **Pugachev's Rebellion occurred during the reign of this monarch, who seized power in a coup against her husband * Peter III.** This monarch's advisors included Grigoriy Orlov and Grigory Potemkin. Who is this German-born Russian Empress?

ANSWER: **Catherine the Great** [also accept Catherine II]

BONUS BONUS: Catherine the Great was a member of what Russian dynastic house which succeeded the Rurikids?

ANSWER: (House) **Romanov**

END OF FIRST QUARTER

*The score at the end of the first quarter is
Team one _____ Team two _____*

Are there any questions?

(pause and look at the coaches if there are no protests proceed)

"Coaches... you may substitute if you wish."

_____ 7. SCIENCE: **GCU or UAG for example.*** The first one is for Alanine while the second is a "stop" type. What is the term for a Nucleotide triplet in the DNA molecule?

ANSWER: **Codon**

BONUS BONUS: Each codon either stops the process of protein synthesis or codes for one of these building blocks of proteins with an amine group. What is the term for this group of organic molecules?

ANSWER: **Amino acid**

_____ 8. LITERATURE: **He is widely considered as a central figure of Romanticism and Gothic fiction in the United* States.** He was an American writer, poet, author, editor, and literary critic. Name the author best known for his tales of mystery and the macabre.

ANSWER: **Edgar Allan Poe**

BONUS BONUS: In this Poe poem, the narrator is paid a mysterious visit by the titular bird. Name the poem.

ANSWER: **The Raven**

_____ 9. MATHEMATICS COMPUTATION: Factor this polynomial: $25x^2 - 121$ [twenty-five X squared minus 121]

ANSWER: **$(5x + 11)(5x - 11)$ OR $(5x - 11)(5x + 11)$** [may just say five X plus 11 times five X minus 11]

BONUS BONUS COMPUTATION: Completely factor this polynomial: $x^3 + 4x^2 - 9x - 36$.
[X cubed plus four X squared minus nine X minus thirty-six]

ANSWER: **$(x + 4)(x + 3)(x - 3)$** [Order of factors may be switched around]

_____ 10. SOCIAL STUDIES: **The first prime minister of this country delivered the “Tryst with destiny” speech. Another prime minister of this country was assassinated by her *** Sikh bodyguards. Indira Gandhi was a prime minister of what South Asian country?

ANSWER: (Republic of) **India**

BONUS BONUS: What first prime minister of India, and father of Indira Gandhi, delivered the “Tryst with destiny” speech?

ANSWER: (Jawaharlal) **Nehru**

_____ 11. POP CULTURE: **It’s a biologically unrelated look-alike,*** or a double, of a living person. Name this term, one of the most searched in 2023, that is a synonym for an apparition.

ANSWER: **doppelganger**

BONUS BONUS: Doppelganger comes from which language?

ANSWER: **German**

_____ 12. SCIENCE: **This durable fiber was developed by Stephanie Kwolek at DuPont in an effort to make lighter, stronger tires.*** It has been used for many more applications, such as the heads for marching band drums. What is the trade name for this DuPont fiber that is most famously used in personal body armor?

ANSWER: **Kevlar**

BONUS BONUS: Kevlar is what type of compound where a long chain is made of smaller repeating units?

ANSWER: **Polymer**

END OF FIRST HALF

The score at the end of the first half is.

Team one _____ Team two _____

Are there any questions?

(pause and look at the coaches if there are no protests proceed)

"Coaches... you may substitute if you wish."

- _____ 13. FINE ARTS: **One work by this composer includes text from a poem by John Henry Newman and is called *The Dream of Gerontius*. This composer's opus 36 is more commonly called the *** Enigma Variations. *Pomp and Circumstance* is a work by what English composer?

ANSWER: (Edward) **Elgar**

BONUS BONUS: Elgar also wrote incidental music for what play by Violet Pearn which was also turned into a musical by Andrew Lloyd Weber?

ANSWER: **The Starlight Express**

- _____ 14. MATHEMATICS COMPUTATION: Bob jogged for one hour, fifty-three minutes and finished at 1:12 pm. At what time did he begin his jog?

ANSWER: **11:19 am**

BONUS BONUS COMPUTATION: Bob flew from Seattle, Washington, to Miami, Florida. If he left Seattle at 8:35 am Pacific Standard Time and landed in Miami at 5:17 pm, Eastern Standard Time. How many hours and minutes was the flight, taking into account the time zones crossed?

ANSWER: **5 Hours, 42 minutes**

- _____ 15. SOCIAL STUDIES: **This war was sparked by an attack in which two Catholic nobles were thrown out of a window in the Second *** Defenestration of Prague. The Battle of Breitenfeld was fought during this war, which saw a Swedish Intervention led by Gustavus Adolphus. What is this religious war which lasted from 1618 to 1648?

ANSWER: **Thirty Years'** (War)

BONUS BONUS: What collection of two treaties ended the Thirty Years War?

ANSWER: (Peace of) **Westphalia**

- _____ 16. SCIENCE: **These reptiles are members of order Squamata [SQUA-maw-tuh] along with several lineages of lizards, meaning it is not a clade.*** Many of these reptiles are venomous, but only a few, like the tiger keelback and the common garter, are poisonous. What are these common legless reptiles?

ANSWER: **Snakes**

BONUS BONUS: Testudinata is the clade that contains these two groups of related creatures with hard, bony back covering for protection. Name both of these types of creatures.

ANSWER: **Turtles and tortoises**

- _____ 17. MATHEMATICS: In a common logarithm, what is the name of the number to the left of the decimal?

ANSWER: **Characteristic**

BONUS: In a common logarithm, what is the name of the number to the right of the decimal?

BONUS ANSWER: **Mantissa**

18. SOCIAL STUDIES: **A French counter to a revolt of a group of these people was led by Charles Leclerc. The Third Servile War was another revolt of a group of these people led by * Spartacus.** Who are these people, whose revolt led to the Haitian Revolution?

ANSWER: Slaves [accept obvious equivalents; do NOT accept Indentured Servants]

BONUS BONUS: Slaves were sent from Africa to the Americas as part of what section of the Triangle trade?

ANSWER: Middle Passage

END OF THIRD QUARTER

The score at the end of the third quarter is
Team one _____ Team two _____

Are there any questions?

(pause and look at the coaches if there are no protests proceed)

"Coaches... you may substitute if you wish."

19. FINE ARTS: ***Beauty Looking Back* and the series *Fifty-Three Stations of the Tokaido* were works in this art movement. Artists who produced works in this movement include * Kuniyoshi and Hokusai.** What is this Japanese art movement, whose name literally means "Pictures of the floating world?"

ANSWER: Ukiyo-e

BONUS BONUS: The Ukiyo-e work *The Great Wave off Kanagawa* appears alongside *Fine Wind, Clear Morning* in what series of prints by Hokusai?

ANSWER: Thirty-Six Views of Mount Fuji

20. SOCIAL STUDIES: **This country was the site of the Orange Revolution in 2004. This country was also the site of the Babi Yar Massacre and the * Donbass War.** What is this country which was invaded by Russia in 2022?

ANSWER: Ukraine

BONUS BONUS: What medieval Viking settlement was established in what is now Ukraine? It was visited by Arab scholar Ibn Fadlan.

ANSWER: Kievan Rus [prompt on "The Rus"]

21. SCIENCE: **This man is best known for the chart he developed as he was writing a chemistry textbook for the class he would teach and needed a way to organize the class, the text, and the elements themselves.*** Who was this Russian chemist that used cards to arrange and rearrange the elements and is now considered the father of the modern periodic table?

ANSWER: Mendeleev

BONUS BONUS: During the creation of the periodic table, Mendeleev had the courage to put these where he believed that undiscovered elements would need to be placed when it was eventually found.

ANSWER: Blank Space [accept any reasonable synonym]

- _____ 22. CURRENT EVENTS: **This cabinet secretary avoided impeachment in late 2023.*** Some lawmakers wanted the Secretary impeached because of his handling of the US-Mexico border. Name the Secretary of Homeland Security.

ANSWER: **Alejandro Mayorkas**

BONUS BONUS: Name the Georgia Republican who introduced the measure to impeach Mayorkas.

ANSWER: **Marjorie Taylor Greene**

- _____ 23. LITERATURE: **This Russian playwright produced four classic plays*** in addition to many short stories. He provides a study of the Russia of his day that is so accurate many consider it a sociological source. Name the Russian author whose most famous play is *The Seagull*.

ANSWER: **Anton Chekov**

BONUS BONUS: Name the Chekov play that takes place in a fruit farm.

ANSWER: **The Cherry Orchard**

- _____ 24. MATHEMATICS COMPUTATION: The length of the diagonal square is 12 inches. What is the area of the square in square inches?

ANSWER: **72** (square inches)

BONUS BONUS COMPUTATION: The perimeter of an equilateral triangle is 24 inches. What is the area of this triangle in square inches? Leave your answer in simplest radical form.

ANSWER: **$16\sqrt{3}$** (square inches) [16 radical three OR 16 (times) square root of three]

END OF GAME

The score at the end of the game is

Team one _____

Team two _____

If there is a tie allow for substitution before you ask the tie-breaker questions. Read all 5 to determine the winner.

Tie Breakers

SCIENCE: This is an organelle inside a eukaryote cell that is surrounded by its own membrane. Inside this organelle the DNA of the cell can be found. What is this structure?

ANSWER: **Nucleus**

LITERATURE: What is the term for the use of a combination of words with loud, harsh sounds?

ANSWER: **cacophony**

SOCIAL STUDIES: What large war included The War of the Two Peters, the Battle of Poitiers, and that Siege of Orleans which was won by Joan of Arc?

ANSWER: **Hundred Years'** (War)

HUMANITIES: What philosopher developed the Categorical Imperative and wrote *Critique of Pure Reason*?

ANSWER: (Immanuel) **Kant**

MATHEMATICS COMPUTATION: Evaluate $125^{-2/3}$ [One hundred twenty-five to the negative two-thirds power].

ANSWER: **1/25** [one over twenty-five OR one twenty-fifth]

Are there any questions? (pause and look at the coaches if there are no protests proceed)
This ends the game. "