



Republic of the Philippines
Department of Education
REGION I
SCHOOLS DIVISION OFFICE OF PANGASINAN II

Office of the Schools Division Superintendent

November 10, 2023

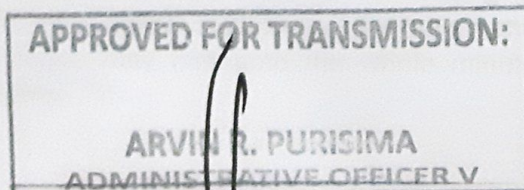
DIVISION MEMORANDUM

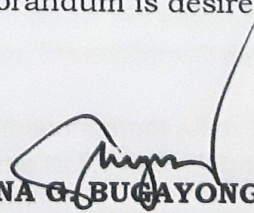
No. 550, s. 2023

ELEMENTARY MATHEMATICS RECREATIONAL GAMES FESTIVAL

To: Public Schools District Supervisors/District In-charge
Elementary School Heads/Officers In-Charge
All Others Concerned

1. This office, through the Curriculum Implementation Division (CID) shall conduct the District Mathematics Recreational Games Festival for the School Year 2023-2024 on November 17, 2023. The District Mathematics Coordinator will determine the venue of the said activity. This year's Mathematics Recreational Games Festival is anchored on the theme: "*Mathematics for Everyone*".
2. The objectives of the Recreational Mathematics Festival are as follows:
 - a. To promote learning and increase awareness about the importance of mathematics through recreational games;
 - b. To showcase the beauty and relevance of mathematics in everyday life;
 - c. To provide a platform for students to engage in hands-on and interactive mathematical activities; and
 - d. To foster collaboration and problem-solving skills, and create a positive and inclusive environment for all participants to explore and appreciate.
3. Attached are the contest guidelines and mechanics for the different Mathematics Recreational Games.
4. Travel and other incidental expenses of the participants shall be charged to local school funds/MOOE subject to the usual auditing and accounting procedures.
5. Immediate and wide dissemination of this memorandum is desired.




LORNA G. BUCAYONG PhD, CESO V
Schools Division Superintendent

RECREATIONAL GAMES GUIDELINES Division Level

DAMATHS

Elem. Level 1 (Grade 1 or 2)	Counting Damath	(operations: +, -)
Elem. Level 2 (Grade 3 or 4)	Whole Damath	(operations: +, -, x, ÷)
Elem. Level 3 (Grade 5 or 6)	Fraction Damath (Positive)	(operations: +, -, x, ÷)

Participants in the Division DAMATHS competition are the Top 1 winners in each level in the school level competition.

- All contestants must be in the venue 15 minutes before the start of the game
- Each grade level will be divided into groups elementary using a bracketing system.
- Draw lots will be used to determine the players in each group.
- Each group may have 5 or 4 members
- The top 3 (a group with 5 members), and top 2 (a group with 4 members) in the elementary will move to the final round.
- The top 5 winners will be chosen after the final round.
- Scores in the scoresheet in each grade level are in the following form:

- | | |
|------------------|---|
| 1. Elem. Level 1 | whole number |
| 2. Elem. Level 2 | whole number; no rounding off for the division with a remainder in the answer |
| 3. Elem. Level 3 | rational numbers (fraction) in the lowest form |

- The first player to move will be determined by tossing a coin.
- The use of a calculator is allowed in all grade levels in the secondary and level 3 for the elementary.
- A move [e.g. 25 → (6, 3)] is good only at the most for one (1) minute including its corresponding entries in the scoresheet; while the game's duration is twenty (20) minutes.
- It will be the responsibility of the arbiter to remind the player to make a move and write entries in the scoresheet. This will be done 10 seconds before the 1-minute time frame ends.
- If in case a player does not finish writing the entries in the scoresheet after 1 minute, the time will be stopped by the arbiter. This is to give the player time to finish writing in the scoresheet. The extra time is exclusive of the twenty-minute game duration.
- The player is required to indicate his/her score under the column score and the running score under the column total score in the scoresheet. Failure to do so will prompt the arbiter to call his/her attention. After three warnings of the same violation, the arbiter will disqualify the player and award the winning points to his/her opponent.
- If in case a player does not finish writing the entries in the scoresheet after 1 minute, the time will be stopped by the arbiter. This is to give the player time to finish writing in the scoresheet. The extra time is exclusive of the twenty-minute game duration.
- A player may consume the whole minute in taking chip/s and writing the entries in the scoresheet.



- A player is required to take chip/s when there is still time left (remaining second/s of the 20-minute game duration).
- The game ends when any of the following situations occur:
 - ✓ If no show of one player is declared after ten minutes.
 - ✓ Repetitive moves of any or both players.
 - ✓ A player resigns or refuses to move.
 - ✓ A player's chip is cornered.
 - ✓ A player has no more chip to move.
 - ✓ The 20-minute game duration ended.
- The remaining chips have to be added to the respective player's total scores.
- "DAMA" chip's corresponding value is doubled. "DAMA" chip taking another "DAMA" chip the score is times 4.
- The player with the greater total score is declared the winner for which he/she is entitled to one (1) point in the tally sheet of contestants or one-half (0.5) point in case of a draw.
- In case two or more players have the same number of winnings, their previous games will be considered. Whoever wins in these games prevails. If a winner cannot be determined from these games, a 10-minute rematch shall be done. Players are not allowed to resign in the rematch. Point System (Adding the Scores in each Game/Rematch) shall be followed if no player emerges as the winner after the rematch.
- Only one scoresheet is allowed to be accomplished alternately by the two players whereby incorrect entries shall be their responsibility. In case of incorrect entries in the scoresheet, a player has to immediately call the attention of the competition facilitator by raising one's hand, that is, after stopping the time. As determined by the said facilitator, the appropriate corrections will be done by the erring player as long as the former's decision is final and unappealable.
- The time spent correcting the entries is exclusive of the 20-minute game duration.
- Scoresheets will be reviewed by a panel of reviewers. Corrections will be done to the wrong entries which were not checked during the game.

RUBIK'S CUBE

Grade 1-6

Solved State (when each of six (6) sides of the cube has one solid color per side)

Participants in the District Rubik's Cube competition are the Top 1 winners in each grade level in the school level competition.

1. Each contestant will be given a standard 3 x 3 x 3 Rubik's Cube which will be provided by the management.
2. Rubik's Cube must have the following standard colors for the six faces of the cube
3. (White, Yellow, Blue, Red, Green, and Orange)
4. During the time of the competition, contestants must be in the venue 15 minutes before the start of the game.
5. The facilitator for Rubik's Cube will be the one to scramble all the cubes of the contestants.
6. All Rubik's Cube to be solved are scrambled with the same sequence for each grade level.
7. The top 5 winners will be chosen based on the time they finish solving a Rubik's Cube for each grade level (Grades 1-6).

SUDOKU

Participants in the District Sudoku competition are the Top 1 winners in each grade level in the school-level competition.

1. Each contestant must bring a pencil and eraser.
2. Contestants must be in the venue, 15 minutes before the scheduled time.
3. Each of the contestants will be given a printed copy of the Sudoku puzzle to solve.
4. Sudoku with standard 9x9 grids will be used for all the levels for each puzzle categorized according to the level of difficulty:
5. Grade 1: 20 Unknown
6. Grade 2: 25 Unknown
7. Grade 3: 30 Unknown
8. Grade 4: 35 Unknown
9. Grade 5: 40 Unknown
10. Grade 6: 45 Unknown
11. Only one round will be played with the following time allotment:
 - a. twenty (20) minutes for grades 1-3
 - b. thirty (30) minutes for grades 4-6
12. After the first round, Top 5 winners will be declared.

TOWER OF HANOI

Participants in the District Tower of Hanoi competition are the Top 1 winners in each grade level in the school-level competition.

Kindergarten:	6 disks
Grade 1:	6 disks
Grade 2:	6 disks
Grade 3:	6 disks
Grade 4:	7 disks
Grade 5:	7 disks
Grade 6:	7 disks

1. Contestants must be in the venue, 15 minutes before the scheduled time.
2. The Tower of Hanoi will be provided by the facilitator so that the height of the post, and the circumference of the disk are all the same.
3. Players are not allowed to use their tower of Hanoi. The official tower of Hanoi will only be used coming from the management.
4. Each player will play the basic (horizontal) game of the tower of Hanoi where one hand will hold the base of the tower and the other hand will move the disk.
5. The game consists of three posts/pegs and a set of disks of different sizes, with the largest disk at the bottom and the smallest disk at the top.
6. The objective of the game is to move all the disks from the leftmost or rightmost post depending on the hand to be used by the player in holding the base of the tower, one disk at a time, without placing a larger disk on top of a smaller one.
7. A disk can only be placed on a post if it is either empty or if the topmost disk on the post is larger than the disk being moved.
8. The Tower of Hanoi should be placed horizontally, and the player must use only one hand to move the disks and the other hand will hold the base of the tower.
9. If the player uses two hands, they will be disqualified.

10. If a disk is unexpectedly placed on a different post or if a larger disk is placed on top of a smaller disk during the game, the player must restart from the beginning.
11. If a disk tumbles off the table unexpectedly or falls on the ground, the player must restart from the beginning.
12. The game is over when the player successfully moves all the disks to the leftmost/rightmost post, in the correct order.
13. The fastest player will win the game.
14. The top 5 winners will be declared for each grade level (Kindergarten-Grade 6).

MODULO ART

Mathematics is the study of patterns. One of the ways in which we may use number patterns is the creation of unique and artistically pleasing designs. MODULO ART is making designs based on modular arithmetic tables.

GUIDELINES:

Participants in the District Modulo Art competition are the Top 1 winners in the school-level competition.

1. All contestants must bring their white cartolina with a pre-drawn grid.
2. The size of the grid for all year levels shall be the largest possible square that can be made from one whole white cartolina. The official coloring medium is "crayon with eight colors". The remaining space in the cartolina after the biggest square was determined will be left empty and primarily part for judging the neatness of the output.
3. "Freehand drawing" must be observed in making the designs/patterns.
4. A4 coupon bond will be used for the pre-generated design and legends. The size of the square for the legends is 1.5 x 1.5 inches (secondary) drawn below the quarter 1 design. For the elementary, the size of the squares of the legends is the same as the size of the squares of the quarter 1 design.
5. The time allotted for the contest is Four (4) hours.
6. The criteria for judging shall be as follows:

a. Neatness	15%
b. Color Harmony	15%
c. Accuracy	
i. Operation used	15%
ii. Consistency of design	15%
d. Creativity	20%
e. Visual Impact	20%
7. The contest for the elementary Level shall be the Latin Square, Modulo 5 Addition using Rotation as the translation.
8. Only the duly registered teacher-coach of the contestant is the only authorized person to make a query. All protests shall be referred to the Board of Judges/Facilitators.
9. The Facilitators shall be in complete control of the contest. Their decision shall be final and irrevocable.
10. The top 5 winners will be declared for each level.



MATH QUIZ

Participants in the District Math Quiz are the Top 1 winners in each grade level in the school-level math quiz.

1. The participants must be in the testing room 5 minutes before the announced time by the facilitators.
2. No parent, coach, trainer, or any unauthorized person shall be allowed to stay within a 5-meter radius of the testing room once the test has started.
3. In case of a tie, tie tie-breaking question shall be used. The tie-breaking questions will be read by the examiner twice. After the second reading, the room examiner says "GO". Only then shall the contestants be allowed to write their answers. The contestant who submits first his/her answer sheet with the right answer shall be declared the winner for that rank.
4. For Grade 1:
 - a. 30 items of basic Arithmetic (Numeracy)
 - b. Operations would be Addition and Subtraction (+, -) only
 - c. No negative answers
 - d. No choices
 - e. Time duration is 1 hour
5. For Grade 2:
 - a. 30 items of basic Arithmetic (Numeracy)
 - b. All operations are to be used (+, -, x, $\sqrt{\quad}$)
 - c. No negative answers
 - d. No remainder for division.
 - e. No Choices
 - f. Time duration is 1 hour
6. For Grade 3:
 - a. 40 items of basic Arithmetic (Numeracy)
 - b. All operations are to be used (+, -, x, $\sqrt{\quad}$)
 - c. No negative answers
 - d. No remainder for division
 - e. No choices
 - f. The time duration is 1 hour and 10 minutes
7. For Grade 4:
 - a. 40 items of open-ended questions
 - b. MELCS quarter 1-4
 - c. Specify the units of the answers whether it is given or not in the problem.
 - d. The time duration is 1 hour and 10 minutes
8. For Grades 5-6:
 - a. 50 items of open-ended questions
 - b. MELCS quarter 1-4
 - c. specify the units of the answers whether it is given or not in the problem.
 - d. The time duration is 1 hour and 30 minutes