

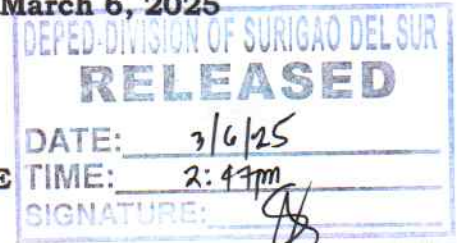


Republic of the Philippines
Department of Education
 Caraga Region
SCHOOLS DIVISION OF SURIGAO DEL SUR

Office of the Schools Division Superintendent

March 6, 2025

Division MEMORANDUM
 No. 115, s. 2025



2025 DIVISION LEVEL NUMBERACE

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

1. The Schools Division of Surigao del Sur, through the Curriculum Implementation Division, will conduct the **2025 NUMBERACE** under the **STEMazing** on March 20-21, 2025, at Wakat NHS, Barobo Surigao del Sur.
2. This event aims to promote mathematical excellence through a competitive and engaging platform. Specifically, it aims to enhance students' speed, accuracy, and problem-solving skills, develop critical thinking, foster enthusiasm for mathematics, and recognize talented learners.
3. The guidelines, mechanics, and sample challenges are attached. (See enclosures No. 1 & 2. The working committees of the said event will be released in a separate memo.
4. The participants will be the winners from each district, determined through school and district-level eliminations overseen by PSDSs and School Heads to maintain fairness.
5. The competition mechanics are attached for reference. All concerned must review and follow the outlined rules.
6. The host school is requested to prepare the contest rooms & area and the waiting area.
7. A virtual meeting will be conducted on **March 10, 2025**, at 2:00 PM to discuss the mechanics of the event. The participants will be the district Mathematics coordinators and two Key Stage 2 Mathematics teachers per district. The meeting link will be sent through the official Group Chat of the district coordinators.





Republic of the Philippines
Department of Education
Caraga Region
SCHOOLS DIVISION OF SURIGAO DEL SUR

8. Support and participation from all districts are required for the success of this event. For inquiries, contact the Curriculum Implementation Division through Ms. Regina Euann A. Puerto, Division Math Focal Person.
9. Immediate and widest dissemination of this memorandum is desired.


LORENZO O. MACASOCOL, PhD, CESO V
Schools Division Superintendent

Encl: None

References: RM no. 0207, s. 2025

REAP//DM- CONDUCT OF NUMBER RACE – DIVISION LEVEL

_____/Mach 3, 2025



Republic of the Philippines
Department of Education
 Caraga Region
SCHOOLS DIVISION OF SURIGAO DEL SUR

Enclosure No. 1 to Division Memorandum No. 115 s, 2025

**IMPLEMENTING GUIDELINES ON THE CONDUCT OF NUMBERACE
 2025-DIVISION LEVEL**

1. The NumbeRace will be an in-person competition, with each district sending two learners and one teacher-coach. Participants will have 2.5 hours to complete math challenges that test their speed, accuracy, and problem-solving skills.

2.

COMPONENT AREA	MATHEMATICS AND PROBLEM SOLVING
KEY STAGE	Key Stage Two (2): Grades 4 to 6
EVENT TITLE	NumbeRace
NO. OF PARTICIPANT/S	2 learners per team (choose participants from Key Stage 2; <i>only one learner per grade level is allowed, e.g. the team is composed of 1 Grade 4 and 1 Grade 6 learner</i>)
TIME ALLOTMENT	2.5 hours total Navigation round: 1.25 hours Final round: 1.25 hours
PERFORMANCE STANDARD	The learners: <ul style="list-style-type: none"> • demonstrate proficiency in applying mathematical concepts to solve authentic real-world challenges; • exhibit analytical and strategic thinking skills in approaching complex mathematical problems; • manifest effective communication and collaborative skills in mathematical discourse and team problem-solving; and • show mastery in integrating concepts across various mathematical domains (Number & Number Sense, Measurement and Geometry, Data and Probability) in practical applications
21ST CENTURY SKILL/S	Critical Thinking and Problem Solving Collaboration and Communication Digital Literacy
CREATIVE INDUSTRIES DOMAIN	<ul style="list-style-type: none"> ▪ Digital Interactive Media Domain (through educational gaming and interactive mathematical applications) ▪ Creative Services Domain (through creative research and development, cultural and recreational services) ▪ Design Domain (through the creation of solutions that address mathematical and spatial problems) ▪ Audiovisual Media Domain (through educational content development)



Republic of the Philippines
Department of Education
 Caraga Region
SCHOOLS DIVISION OF SURIGAO DEL SUR

DESCRIPTION	NumbeRace is a two-phase mathematical adventure competition designed for Grades 4-6 learners that combines physical exploration, mathematical investigation, and problem-solving in real-world contexts.
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TECHNICAL SPECIFICATIONS

A. MATERIALS, TOOLS AND EQUIPMENT	To be provided by the participants: <ul style="list-style-type: none"> • Basic CASIO calculator (e.g., mx-12b) • Measuring tools (ruler, tape measure, protractor, etc.) • Writing materials 	To be provided by the event organizers: <ul style="list-style-type: none"> • Team identification badges • Station markers and QR code printouts • Scoring sheets and evaluation forms • Investigation tools and materials
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B. VENUE	School grounds or designated competition area with: <ul style="list-style-type: none"> • Multiple checkpoint stations • Investigation areas • Presentation space • Rest areas and first aid stations • Emergency assembly points
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CRITERIA FOR JUDGING	Accuracy (60%) and speed (40%)
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EVENT RULES AND MECHANICS

A. Competition Structure	<ul style="list-style-type: none"> • <i>Navigation Round</i> (This may be done in batches if the space is limited.) o Individuals and teams navigate through multiple stations o Solve challenges at each station: <ul style="list-style-type: none"> - Station 1: Individual Challenge - Station 2: Individual Challenge - Stations 3 to 5: Team Challenges • For stations 1 and 2, representatives may ask to be replaced by the other team member when they cannot answer the individual challenge assigned to them. There will be an additional 30-second penalty for the replacement. • A <i>Checkpoint Marshall</i> at each station will validate the team's answer. If the answer is incorrect, the teams are allowed to retry until the maximum number of attempts is consumed. • The maximum time allotted to complete the challenges in the
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Republic of the Philippines
Department of Education
 Caraga Region
SCHOOLS DIVISION OF SURIGAO DEL SUR

navigation round is 75 minutes.

- *Final Round*
 (This may be done in batches if the space is limited.)
- o Teams will go through team challenges from Stations 6 to 10. There will be no individual challenges in the final round.
- The maximum time allotted to complete the challenges in the final round is 75 minutes.

Challenges include:

- Application of mathematical concepts and analysis of real-world data,
- Developing mathematical solutions and solving problems, and
- Presenting solutions and findings.

At the end of the competition, the group with the highest cumulative score will be declared the overall champion. In case of a tie, a tie-breaker question will be given.

3. SCORING GUIDE:

Stations 1 to 9

ACCURACY (60%)		SPEED (40%)	
Obtained the correct answer in 1 trial	60	Submitted the correct answer in the shortest time	40
Obtained the correct answer in 2 trials	57	<i>The score will depend on the rank of the participants/ team based on the time of submission of correct answers.</i>	38
Obtained the correct answer in 3 trials	54		36
Obtained the correct answer in 4 trials	51		34
Obtained the correct answer in 5 trials	48		32
Obtained the correct answer in 6 trials	45		30
Obtained the correct answer in 7 trials	42		28
Obtained the correct answer in 8 trials	39		26
Obtained the correct answer in 9 trials	36		24
Obtained the correct answer in 10 trials	33		22
Unable to obtain the correct answer in 10 trials			0



Republic of the Philippines
Department of Education
 Caraga Region
SCHOOLS DIVISION OF SURIGAO DEL SUR

4. SAMPLE SCORESHEET

TEAM	ACCURACY	SPEED	TOTAL
Station 1			
<i>Example:</i> A	<i>completed the challenge in three trials</i> 54	<i>1st to complete the challenge</i> 40	94
B	<i>completed the challenge in one trial</i> 60	<i>3rd to complete the challenge</i> 36	96
C	<i>completed the challenge in nine trials</i> 36	<i>6th to complete the challenge</i> 30	66
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			



Republic of the Philippines
Department of Education
 Caraga Region
SCHOOLS DIVISION OF SURIGAO DEL SUR

Enclosure No. 2 to Division Memorandum No. 115 s, 2025

Challenges for NumbeRace: Division Level

Station	Challenge	Estimated Time Allotment	Description of the Challenge	Materials (to be Provided by the Participants)	Materials (to be provided by the Organizer)	Human resource requirements	Instructions for Contestants	Instructions for Station Marshall	Instructions for Proctors
1 (Individual Challenge)	Tangram	10 minutes (8 minutes to solve + 2 minutes transition)	Participants solve a Tangram puzzle by arranging seven geometric pieces to match a given shape. This challenge tests spatial reasoning and pattern recognition skills.	None	Tangram puzzle sets (1 per participant) Puzzle reference cards (1 per participant) Digital Timer	<p>1 Station Marshall – Facilitates the challenge, distributes materials, and ensures proper mechanics.</p> <p>2 Proctors – Monitor accuracy and record completion times.</p>	<p>Each participant receives a Tangram puzzle set and a reference card.</p> <p>Arrange all 7 pieces to match the given shape exactly.</p> <p>Raise your hand once you have completed the puzzle.</p> <p>Time stops when the proctor verifies that the shape is correct.</p>	<p>Distribute Tangram sets and reference cards.</p> <p>Announce "Start" and begin the timer.</p> <p>Ensure that all pieces are used in the correct formation.</p> <p>Verify accuracy and record the completion time for each participant.</p> <p>Declare winners based on accuracy</p>	<p>Monitor participants to ensure they follow the mechanics.</p> <p>Check for correct completion before stopping the timer.</p> <p>Record accuracy and time, then submit to the Station Marshall.</p>



Republic of the Philippines
Department of Education
 Caraga Region
SCHOOLS DIVISION OF SURIGAO DEL SUR

2 (Individual Challenge)	Sudoku	12 minutes (10 minutes to solve + 2 minutes transition)	Participants complete a 4x4 Sudoku grid, ensuring numbers do not repeat in any row, column, or 2x2 box. This challenge tests logic and problem-solving skills. The Sudoku sheet to be given shall compose of 4 puzzles with varying levels of difficulty: easy, medium, difficult, and evil. Participants must fill in the grids correctly within the given time.	Pencils and erasers	Printed Sudoku puzzle sheets (1 per participant) Digital Timer	1 Station Marshall – Facilitates the challenge, distributes materials, and ensures proper mechanics. 2 Proctors – Monitor accuracy and record completion times.	Each participant receives a 4x4 Sudoku puzzle sheet. Complete the grid without repeating numbers in any row, column, or 2x2 box. Raise your hand when finished. Time stops once the proctor verifies a correct submission.	(60%) and speed (40%). Distribute puzzle sheets and ensure all participants have pencils. Announce "Start" and begin the timer. Verify submitted puzzles for correctness. Record accuracy and speed for scoring.	Monitor participants and prevent cheating or rule violations. Check completed Sudoku grids against the answer key. Record scores and submit results to the Station Marshall.
3 (Team Challenge)	Angle Hunt	15 Minutes (12 minutes to find angles + 3 minutes transition)	Teams locate and classify angles (right, acute, obtuse) in their surroundings, estimating their measurements.	None	Printed worksheets (1 per team) Pencils (1 per team) Clipboards (1 per team) Protractors (for	1 Station Marshall – Supervises and validates correct classifications. 3 Proctors – Monitor teams, check	Identify objects that contain right, acute, and obtuse angles. Record object names and	Distribute worksheets and clipboards to teams. Announce "Start" and keep track of	Monitor teams and ensure they correctly classify angles. Check worksheet



Doc. Ref. Code	Effectivity	Rev	Page
SDO-CID-F016	01.15.24	00	2 of 1



Republic of the Philippines
Department of Education
 Caraga Region
SCHOOLS DIVISION OF SURIGAO DEL SUR

			This challenge develops spatial awareness and geometry skills.		verification, 1 per team)	worksheets, and verify answers.	estimated angle measurements on the worksheet. Submit the worksheet within the time limit. The team with the most correctly classified angles wins.	the time. Verify submissions and check angle classifications. Record scores based on accuracy and speed.	submissions and verify estimated angles. Record scores and assist the Station Marshall.
4 (Team Challenge)	Step by Step	18 minutes (15 minutes to estimate and calculate + 3 minutes transition)	Teams estimate the perimeter of a marked area using footsteps as the unit of measure. This challenge requires estimation, measurement, and teamwork.	None	Pre-marked area for measuring Measuring tape (for verification) Clipboards and worksheets (1 per team) Pencils (1 per team)	1 Station Marshall – Oversees the activity, ensures fair play, and verifies calculations. 3 Proctors – Assist with measurement verification and checking calculations.	Each team estimates the perimeter of a marked area using footsteps. Count the steps along each side and multiply by the average foot length. Submit the final perimeter calculation. The team with the closest estimate wins.	Provide each team with a worksheet and clipboard. Explain the mechanics clearly before starting. Verify calculations against the actual perimeter. Record results and announce the winning team.	Observe and ensure teams follow the correct estimation process. Assist with measuring tape verification. Record each team's submitted estimate for comparison.



Republic of the Philippines
Department of Education

Caraga Region

SCHOOLS DIVISION OF SURIGAO DEL SUR

<p>5 (Team Challenge)</p>	<p>Number Ninja</p>	<p>20 minutes (16 minutes to complete + 4 minutes transition)</p>	<p>Teams step on numbered tiles in ascending order based on a math sequence, solving equations quickly while navigating the course.</p>	<p>None</p>	<p>Number stepping mats (pre-marked with math expressions) Floor tape to secure tiles Digital timers</p>	<p>1 Station Marshall – Explains the challenge, ensures rules are followed.</p> <p>4 Proctors – Monitor accuracy of steps, assess penalties, and record times.</p>	<p>Step on numbered tiles in ascending order based on the given math sequence. Only one player steps at a time. Incorrect steps result in a 10-second penalty. The fastest team with the correct sequence wins.</p>	<p>Ensure the number mats are correctly arranged before the game. Explain the mechanics clearly before starting. Monitor the stepping sequence and apply penalties for errors. Record results and declare the winning team.</p>	<p>Observe and verify that participants step in the correct order. Enforce penalties for incorrect steps. Record scores and completion times</p>
<p>6 (Team Challenge)</p>	<p>Game of Fifteen</p>	<p>12 minutes (10 minutes to solve + 2 minutes transition)</p>	<p>Teams strategically place numbers on a 6x6 grid to form rows, columns, or diagonals that sum to 15.</p>	<p>None</p>	<p>6x6 grid game boards (1 per team) Number cards (1-10, 1 set per team) Digital Timer Score Sheets</p>	<p>1 Station Marshall – Facilitates the challenge, explains rules, and ensures fair play.</p> <p>2 Proctors – Monitor team progress, verify sums, and record scores.</p>	<p>Teams take turns placing numbers on the grid. The goal is to create rows, columns, or diagonals that sum to 15. The first team to complete a valid sum wins. Multiple solutions are allowed within the time limit.</p>	<p>Set up game boards and distribute number cards. Announce "Start" and begin the timer. Verify valid sums and monitor team performance. Declare winners based on accuracy (60%) and speed (40%).</p>	<p>Monitor teams for rule compliance. Verify sum calculations. Record scores and submit to the Station Marshall.</p>



Doc. Ref. Code	Effectivity	Rev	Page
SDO-CID-F016	01.15.24	00	4 of 1



Republic of the Philippines
Department of Education

Caraga Region

SCHOOLS DIVISION OF SURIGAO DEL SUR

7 (Team Challenge)	Digit Cards	15 minutes (12 minutes to solve + 3 minutes transition)	Teams solve mathematical problems based on a randomly assigned 4-digit number.	Basic calculator	Problem worksheets (1 per team) 4-digit number cards Solution sheets Digital Timer	1 Station Marshall – Oversees challenge and validates solutions. 3 Proctors – Monitor calculations, verify answers, and record scores.	Receive a random 4-digit number. Solve five math problems related to the number. Show all work and submit answers within the time limit.	Distribute worksheets and number cards. Explain problem requirements. Verify solutions and calculate scores. Declare winners based on accuracy and speed.	Monitor teams during problem-solving. Verify calculations. Record scores and submit to the Station Marshall.
8 (Team Challenge)	Treasure Hunt	18 minutes (16 minutes to solve + 2 minutes transition)	Teams solve math-based clues to locate hidden objects.	None	Clue cards with mathematical riddles Hidden treasure items Area map Digital Timer	1 Station Marshall – Coordinates the hunt and verifies solutions. 4 Proctors – Monitor different search areas and verify solutions.	Solve each mathematical clue. Use the solutions to find hidden items. Document found items and return to the base within the time limit.	Brief teams on hunt boundaries and rules. Distribute the first set of clue cards. Monitor progress and verify final collections. Score based on accuracy and completion time.	Monitor assigned search areas. Verify solutions before giving the next clue. Track team progress and report to the Marshall.
9 (Team Challenge)	Survival Challenge	12 minutes (10 minutes to plan +	Teams select survival items	Basic calculators	Item price lists Budget	1 Station Marshall –	Review available	Distribute materials and	Check budget



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Doc. Ref. Code	Effectivity	Rev	Page
SDO-CID-F016	01.15.24	00	5 of 1



Republic of the Philippines
Department of Education
 Caraga Region
SCHOOLS DIVISION OF SURIGAO DEL SUR

		2 minutes transition)	while managing a limited budget.		worksheets Digital Timer	Oversees challenge and evaluates decisions. 2 Proctors – Monitor calculations and verify budgets.	items and their costs. Select survival items while staying within a Php 1000 budget. Calculate total costs and justify selections in writing.	explain budget constraints. Monitor team discussions. Review final item selections. Score based on practicality, mathematical accuracy, and speed	calculations for errors. Verify item selections and ensure they fit within the budget. Record team decisions and submit to the Station Marshall.
10 (Team Challenge)	Disaster Simulation	18 minutes (16 minutes to solve + 2 minutes transition)	Teams apply their survival item choices from Station 9 to solve real-world disaster scenarios.	None	Scenario cards Evaluation rubrics Digital Timer Team response sheets	1 Station Marshall – Presents scenarios and evaluates solutions. 3 Judges – Monitor responses and record scores.	Address three survival scenarios. Use selected items from Station 9 to create solutions. Present responses clearly within the time limit.	Present scenarios sequentially. Monitor solution presentations. Evaluate responses using the rubric. Calculate and declare final scores.	Time each scenario response. Record details of the solutions. Assist with evaluations and submit scores to the Marshall.