

Solve & Defend National Competition Guidelines

1. Participant Grouping

- Students compete in teams of **3–4 participants**.
- Teams are organized strictly by **grade level (3rd–8th grade)**.
- Teams will compete **only against others in the same grade division**.

2. Competition Structure

- The National Competition focuses on the **advancement through Regionals**.
- Teams will solve **rigorous, scenario-based math problems** and defend their reasoning.
- Multiple problem sets will be available, allowing teams to **continue competing as time permits**.

3. Problem Design

- All problems are **real-world, scenario-based tasks** requiring:
 - Mathematical calculations
 - Critical thinking and analysis
 - Application of solutions
 - Clear verbal justification
- Each grade level includes **four unique problem sets (labeled 1–4)**:
 - Example: 3rd Grade → 3-1, 3-2, 3-3, 3-4
- While rigor remains consistent within a level, **problem scenarios vary**.

4. Skill Development Assistance

- **Divisional Level:** After the second unsuccessful attempt, groups will be assigned an adult mentor to assist and guide their success with the Green Sheet Scenarios.
- **Regional and National Level:** No assistance is allowed.

5. Scoring System

Teams are evaluated based on both **accuracy and reasoning**, with a maximum of **100 points per Blue Level challenge**:

- **25 points** – Accurate Income Calculation
- **25 points** – Accurate Expense Totals
- **15 points** – Correct Solution (shortfall or surplus)
- **35 points** – Clear and logical Explanation
 - *Note: Explanation points are awarded only if calculations are correct*

6. Judging Process

- Teams submit a **Response Record (score sheet)** at the Scoring Area.
- Judges will:
 - Review calculations
 - Listen to team explanations
 - Score using the official rubric

7. Attempts & Score Adjustments

- Teams must earn a **minimum of 65 points** for a successful attempt.
- If a team scores below 65:
 - They may **retry the same problem**
 - Each additional attempt reduces the **maximum possible score by 25 points**
- Example:
 - 1st attempt: up to 100 points
 - 2nd attempt: up to 75 points
 - 3rd attempt: up to 50 points

8. Advancement & Participation

- Teams may continue working through **multiple scenarios** during the competition.
- Final rankings are based on:
 - Total points earned
 - Accuracy and quality of explanations
 - Number of successfully completed challenges

9. Competition Expectations

- No adult assistance is permitted at the National level.
- Teams are expected to demonstrate:
 - **Independent problem-solving**
 - **Collaboration and teamwork**
 - **Clear mathematical communication**

10. Competition Events

- **Divisional Level:** Green, Pink, and Blue
- **Regional Level:** Pink and Blue
- **National Level:** Blue only