

# Rules for the nth CMI Tessellate Integration Bee

## Quick Rules

The Integration Bee is on **25 Jan 2025**, with a paper round (12–12:30 PM) and tournament (1:30–3 PM). Solve 8 questions in 30 mins. Top 8 advance. Tournament: double elimination, 2-player matchups, timed integrals. Finals: single elimination. No digital help. Prizes for top 4.

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## Full Detailed Rules

### Event Schedule

- **Date:** 25th January 2025
- **Paper Round:** 12:00 PM – 12:30 PM
- **Break:** 12:30 PM – 1:30 PM
- **Tournament Stage:** 1:30 PM – 3:00 PM

### Paper Round

- **Format:**
  - The paper consists of **8 questions** divided into **4 sheets** (2 questions per sheet).
  - Sheets are labeled **x1, x2, x3, x4**, with  **$x_i$  harder than  $x_j$  if  $i > j$** .
  - You may start with any sheet but must submit it to receive the next one.
  - Once submitted, answers are locked and cannot be changed.
  - You may leave once all 4 sheets are submitted.
- **Scoring:**
  - **x1:** 4 marks per question
  - **x2:** 5 marks per question
  - **x3:** 7 marks per question
  - **x4:** 9 marks per question
- **Advancement:**
  - The **top 8 participants** (plus at most 2 ties for the last place) advance to the tournament stage.
  - If further ties occur, tie-breaker integrals will decide the final slots.

### Tournament Stage

- **Location:** NKN Hall

- **Format:**
  - **Double Elimination:** Players who lose once enter the losing bracket. A loss in the losing bracket results in elimination.
  - The **winning bracket** and **losing bracket** each produce one finalist. The final round is **single elimination**.
  - **Matchup Rules:**
  - Each matchup involves **2 contestants**.
  - An integral is displayed simultaneously to both contestants, and a timer starts.
  - Contestants must **circle or box their answer** to lock it in. Once locked, answers cannot be changed.
  - **Winning Conditions:**
    - If a contestant locks in the **correct answer** within the time limit **before their opponent**, they win and advance.
    - If a contestant locks in a **wrong answer** and the opponent locks in the correct answer within the time limit, the opponent advances.
    - If **both give wrong answers** or time runs out, either an **extra 1-minute round** or an **additional question** will be provided.
    - If the deadlock persists after **3 extra questions** or equivalent amount of time, **both contestants take a loss**.
  - **Final Round:**
    - The number of questions in the finals is at the discretion of the organizers(will be announced before the finals).
    - Finals will determine the **Gold (Grand Integrator)**, **Silver**, while we would already know the **Bronze**, and **Honorable Mention** winners from the 4th round.
    - The format of finals will be revealed on the day of the tournament.
  - **Time Limits:**
    - **Rounds 1–3:** 2 minutes per question
    - **Round 4:** 3 minutes per question

## Participation Rules

- **Eligibility:**
  - Open to all **CMI BSc, MSc, MSDS, PhD students, PostDocs, faculty, and staff**.
  - No external participants allowed.
- **Integrity:**
  - **No digital aids** (calculators, phones, or any electronic devices).
  - **No external communication** during the event.
  - Cheating or rule-breaking leads to **immediate disqualification**.
- **Techniques:**
  - Any valid integration technique is allowed.

## Additional Notes

- The organizing team reserves the right to make clarifications or minor adjustments to the rules if needed.
- Participants are encouraged to arrive 15 minutes before the event start time.
- Questions about rules or logistics should be directed to the organizing team before the event begins.

Good luck, and may the best integrator win!