



COMPETITION STRUCTURE

Official Rules and Structure of the GAAC Contest

Round 1 System

Round 1 is the qualification stage, completed individually by every participant on the official examination platform. It consists of **40 multiple-choice questions** covering all six subjects within a fixed time limit. The unified Round 1 scoring system, including the grade factor and the team-size factor, is applied to rank all teams at the close of the stage, and this single ranking decides which teams advance to Round 2.

Qualification from Round 1

After Round 1 is closed, all teams are ranked according to the unified scoring system. The **top 16 teams** qualify for the *Round of 16 Qualifier*. The remaining teams do not proceed to Round 2; however, their Round 1 ranking is retained for the overall competition ranking, awards, and Honorable Mention.

Round of 16 Qualifier

The 16 qualified teams sit the *Round of 16 Qualifier* on the same examination platform used in Round 1. It consists of **20 multiple-choice questions**, noticeably more challenging than Round 1, with a **30-minute** time limit, completed individually. The unified Round 1 scoring system is applied again, and the **top 8 teams** qualify for the Knockout Stage.

Session Conduct & Proctoring

Each examination session is run through **supervised Zoom meetings** and is **under active, strict invigilation**. To protect the fairness of the competition, every participant is required to:

- keep their **camera switched on** for the whole session, showing their face and working area clearly;
- **share their screen** so invigilators can monitor the examination window at all times;
- keep their microphone available and respond to any direct request from the invigilator during the session.

Any participant who fails to enable their camera or screen sharing, or who behaves in a manner that suggests the examination is not being taken independently, will be flagged and may be subject to disqualification.

Scoring System

Let C_i be the number of correct answers of participant i . A grade factor is applied by grade level:

$$G_i = \begin{cases} 1.05, & \text{Grade 9–10,} \\ 1.00, & \text{Grade 11–12.} \end{cases}$$

The adjusted individual score is $S_i = C_i G_i$. The team score is then computed from the registered members' scores:

- 1 member: $S_{\text{team}} = S_1$
- 2 members: $S_{\text{team}} = \left(\frac{S_1 + S_2}{2} \right) \times 1.05$
- 3 members: $S_{\text{team}} = \left(\frac{S_1 + S_2 + S_3}{3} \right) \times 1.08$

These same principles are applied at every stage, so the team ranking is calculated consistently across the whole competition.

Knockout Stage

The 8 highest-scoring teams advance to the Knockout Stage. Matches are conducted through **supervised Zoom meetings**, with two teams competing directly against each other in each match. Each match consists of **10 non-multiple-choice questions** with a **1-hour** time limit. The questions are delivered in PDF through the competition platform; team members work together and submit their final answers within the allocated time.

Knockout Progression

The Knockout Stage follows a direct elimination ladder:

1. **Quarterfinals**: 8 teams, producing 4 winners.
 2. **Semifinals**: 4 teams, producing 2 finalists.
 3. **Final**: 2 teams, determining the champion and runner-up.
- The winning team of each match advances to the next stage.

Team Collaboration

The Round 1 and Round of 16 Qualifier examinations are completed **individually** by all participants. Team collaboration begins only in the Knockout Stage, where all members of a team may discuss the problems and work together to determine their final answers.

Academic Integrity

All participants must comply with the competition's academic integrity rules throughout every stage. Confirmed cheating by an individual disqualifies that participant; confirmed cheating by **two or more members** disqualifies the **entire team**. All decisions are made by the competition administration based on the available evidence and the official rules.

Competition Progression

Main Track	Knockout Ladder
Round 1	8 Teams
Top 16 → Round of 16	Quarterfinals → 4 Teams
Top 8 → Knockout	Semifinals → 2 Teams
Remainder → Awards	Final → Champion / Runner-up

Detailed guidelines on question format, proctoring, answer submission, and match rules will be published before the start of the relevant stage. Every decision is final and is taken by the competition administration.

Rules at a Glance

- Round 1: 40 MCQs, individual, unified scoring.
- Round of 16: 20 MCQs, individual, 30 minutes.
- Knockout: 10 open questions per match, 1 hour, on Zoom.
- Camera and screen sharing are mandatory in every supervised session.
- Collaboration is permitted only in the Knockout Stage.
- Cheating leads to individual or full-team disqualification.
- Round 1 subjects: Observational Astronomy, Astrophysics, Planetology, Cosmology, Orbital Mechanics, and Space Missions.
- Rankings are published after each stage and drive qualification.