## UTMC Scoring Guidelines

## UTMC Committee

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## **Individual Scoring**

For each individual round (Numerical and Geometry), a contestant's *raw score* will be the sum of the point values of the problems they solved. Raw scores will then be normalized to make the top score worth 100 points.

To be precise,

$$score = \frac{raw\ score}{raw_{max}} \times 100,$$

where raw<sub>max</sub> is the maximum raw score received by any contestant in that round.

A contestant's *individual total* will be the sum of their Numerical and Geometry scores. Contestants will be ranked by their individual total, and the top 3 students in each division will receive prizes (see the awards section of the website for details).

## Team Scoring

A team's Individual Round Score will be calculated as the arithmetic mean of the individual totals of each team member. The arithmetic mean ensures that teams with fewer members are not at a disadvantage.

For the Team Round, a team's *raw score* will be the sum of the point values of the problems they solved. Raw scores will then be normalized to make the top score worth 100 points:

$$\label{eq:core_raw_max} \text{Team Round Score} = \frac{\text{raw score}}{\text{raw_{max}}} \times 100$$

where raw<sub>max</sub> is the maximum raw score received by any team in the Team Round.

A team's Marathon Round Score is calculated in the same way as the Team Round Score, except the raw score will be the sum of the point values of all problems solved on the first submission (with no second submission), plus half the point values of all correct second submissions.

Note that the Individual Round Score is out of 200, while the Team Round and Marathon Round Scores are out of 100. A team's *Total Score* is the sum of their Individual, Team, and Marathon Scores (out of 400). Teams will then be ranked by their Total Score, and the top 3 teams in each division will receive prizes.