

RMO 2013 (Mumbai region) in numbers

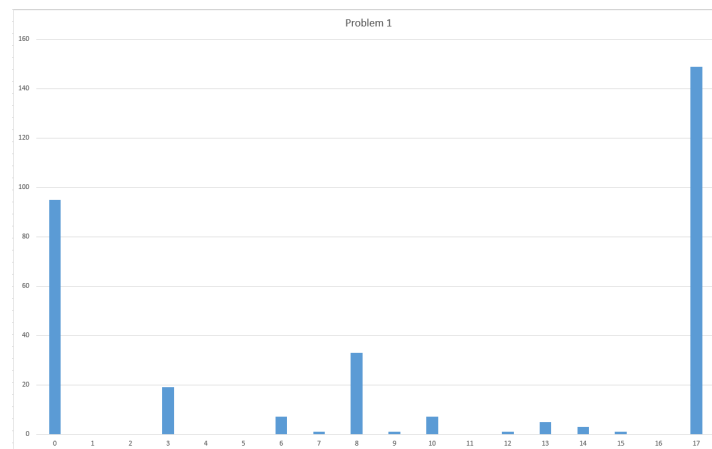
- 311** Number of students who wrote RMO 2013 (Mumbai region).
- 445** Number of scores of 17.
- 37.25** Average score.
- 36** Median score.
- 23.61** Standard deviation of the scores.

Problems and score distributions

The following are some comments about each of the problems and their score distributions.

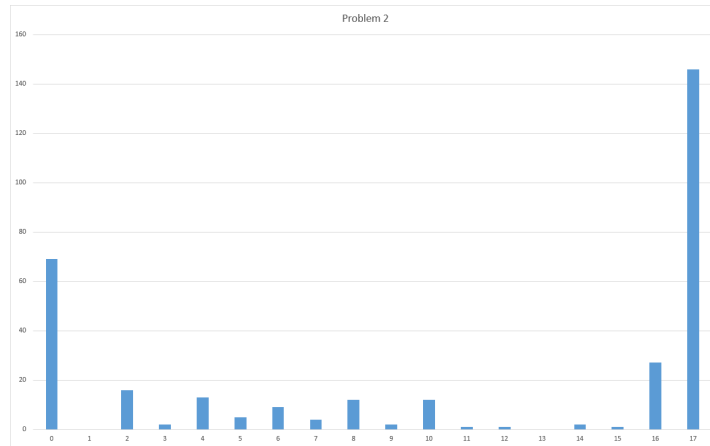
Problem 1 (Average score: 9.68)

Many students used “SSA congruence” test to show that certain two triangles are congruent. This is as bad a mistake as dividing two sides of an equation by 0. Since this was a basic conceptual mistake, 9 points were deducted if “SSA” test was used.



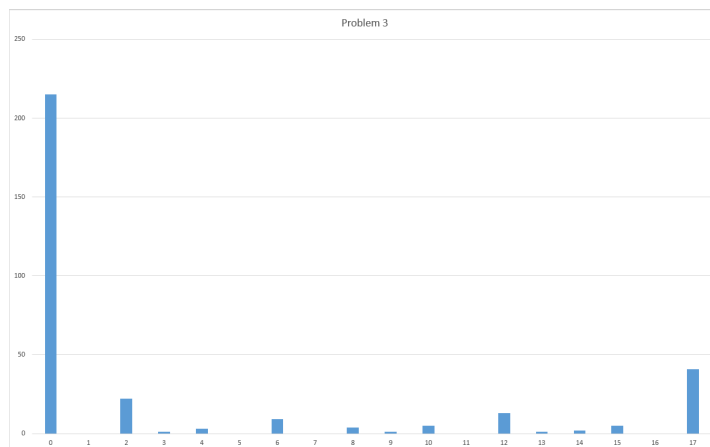
Problem 2 (Average score: 10.59)

This was the easiest problem on the paper (according to students' performance). Typical mistakes included forgetting some small cases and mentioning only one solution.



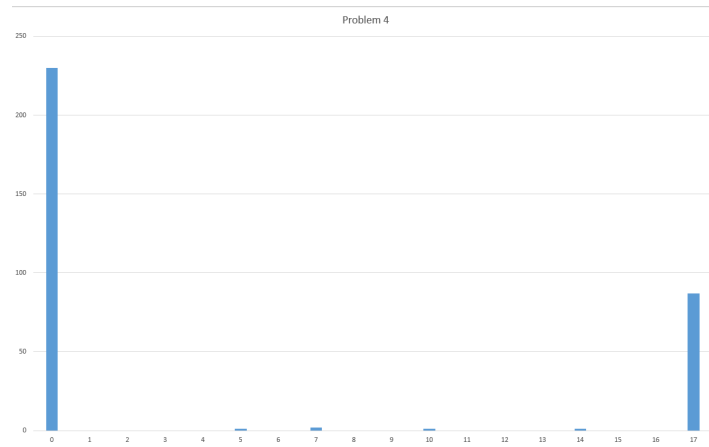
Problem 3 (Average score: 3.64)

Trying to enumerate all the 3-good sets (and failing to do so) is not given any credit.



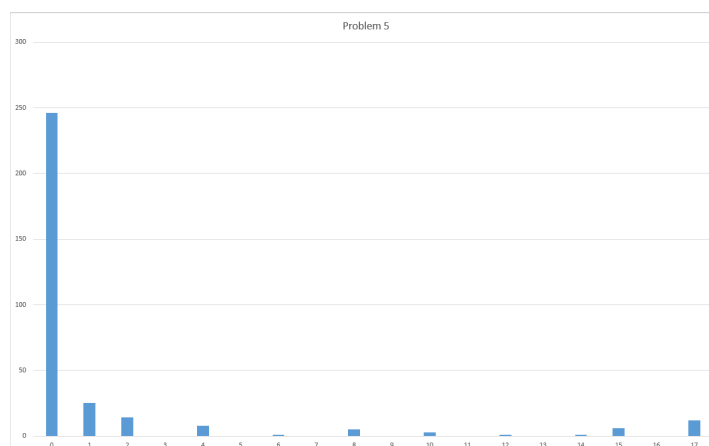
Problem 4 (Average score: 4.73)

There were very few cases of partial credit in this problem. This problem had a wide variety of solutions using various methods – ratios of similar triangles, ratios of areas, Menelaus' theorem, vectors, coordinate geometry, ...



Problem 5 (Average score: 1.49)

This was the most difficult problem of the paper. Most students made no or very little progress. Many reduced the problem to showing that certain two natural numbers are coprime and this was not given much credit since it is as hard as the original problem itself.



Problem 6 (Average score: 7.12)

Many partial credits were given in this problem since students could prove many statements that would lead to the solution. Nine points of credit is given to the first part of this problem.

