# Math Olympics 2018 Summary 

## Participation

This year, there were 332 students from 14 schools participating in Math Olympics. The following table shows the number of students and schools by level:

| level | students | schools |
| :--- | ---: | ---: |
| 1 | 169 | 12 |
| 2 | 163 | 10 |

These are the numbers of participants in each grade, by level:

| level | 07 | 08 | 09 | 10 | 11 | 12 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| 1 | 1 | 21 | 68 | 58 | 20 | 1 |
| 2 | 0 | 0 | 2 | 14 | 79 | 68 |

## Scores

With a maximum possible score of 25 , the average score on the level I exam was 7.28 and the average on the level II exam was 7.24 (as always, tough exams!). The standard deviations for levels I and II were 3.98 and 3.73 , respectively. The score distributions for both levels are shown below:

Level 1


## Level 2



## Breakdown by Question

The following figures break down answers per question.

## Level 1

First we will look at simple rate of correct answers per question.


We can display more detailed information. For each question, in the figure below, the bars show how many time did a specific answer occur. The letter ' X ' is used to indicate invalid answers - questions left blank or questions with two or more answers selected. For each question, the correct answer is indicated by different color bar.

## Level 2

Again a frequency of correct answer per question, this time for level 2:


Figure 1: Number of times each possible answer was chosen, per question. ' X ' stands for invalid answers (no option or more than one option chosen)


More detailed information for level 2:


Figure 2: Number of times each possible answer was chosen, per question. ' $X$ ' stands for invalid answers (no option or more than one option chosen)

