

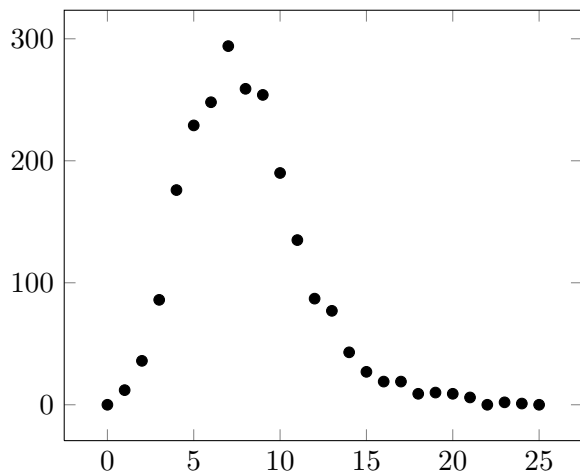
2018 $F = ma$ Contest Results

In 2018 there were two $F = ma$ exams administered. The data from the exams are in the table below.

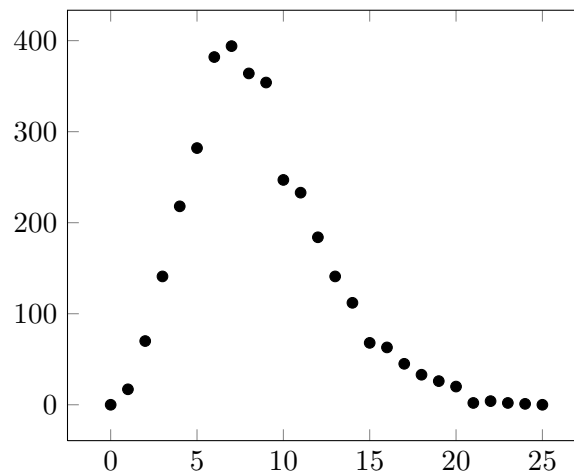
Exam	A (Jan 23)	B (Jan 31)
Number of scored exams	2228	3403
Minimum score	1	1
Maximum score	24	24
Median score	8	8.5
Average score	8.03	8.56
Standard deviation	3.45	3.83

Score distributions for the two exams are in the graphs below. The vertical scale is the number of scores; the horizontal scale is the score.

Exam A (Jan 23)



Exam B (Jan 31)



In order to meet the goal of selecting the top students, of which approximately 400 are invited to take the USAPhO exam, it is necessary to set cutoffs that reflect the differences in the number of test takers of the two exams as well as the possible differences in the difficulty of the two exams.

As such, the minimum scores necessary to get an invitation to sit the 2018 USAPhO will be

- A score of **14** for Exam A (Jan 23)
- A score of **15** for Exam B (Jan 31)

For students who attempted both exams, only the Exam B score will be used to determine if they will get an invitation.