

# **Math Open at Andover 2023 Statistics**

The MOAA Team

7 October 2023

## Speed Round

The Speed Round was a 10-problem, 20-minute exam. Problem weights are listed below.

Problem	1	2	3	4	5	6	7	8	9	10
Weight	2	2	2	3	3	4	5	6	6	7

### In-Person

Mean: 6.5

First Quartile: 2.3

Median: 6

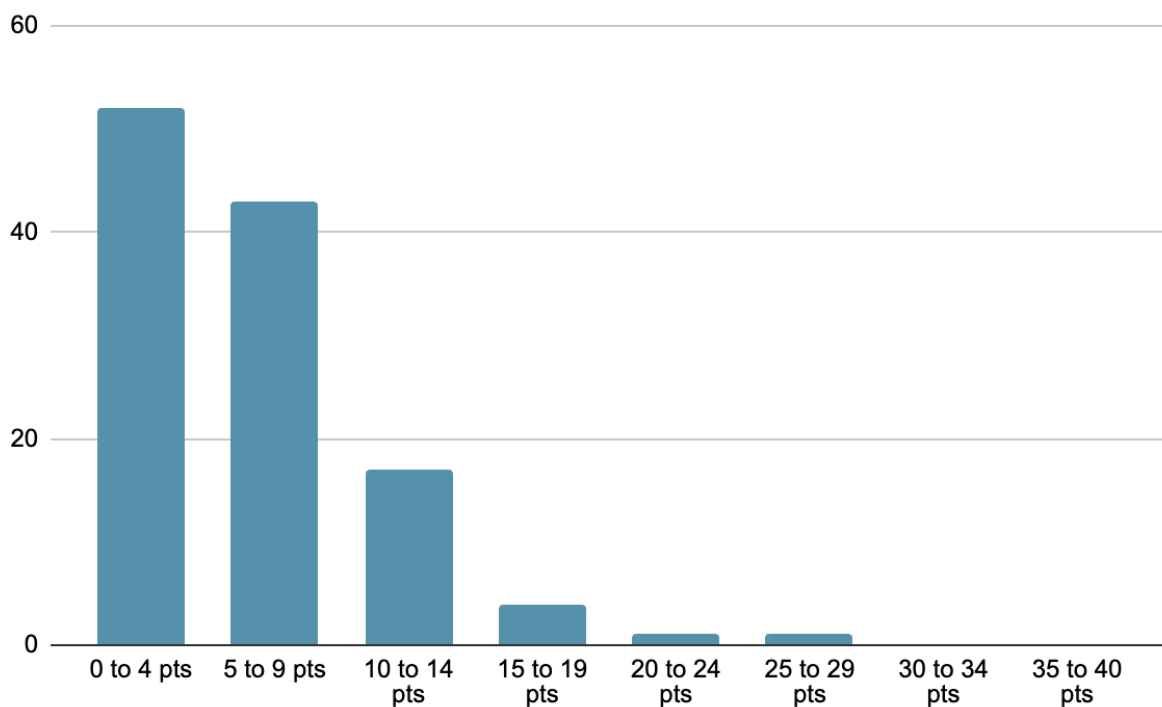
Third Quartile: 9

Minimum: 0

Maximum: 27

Mode: 2

Standard Deviation: 4.8



## Virtual

Mean: 7.5

First Quartile: 4

Median: 6

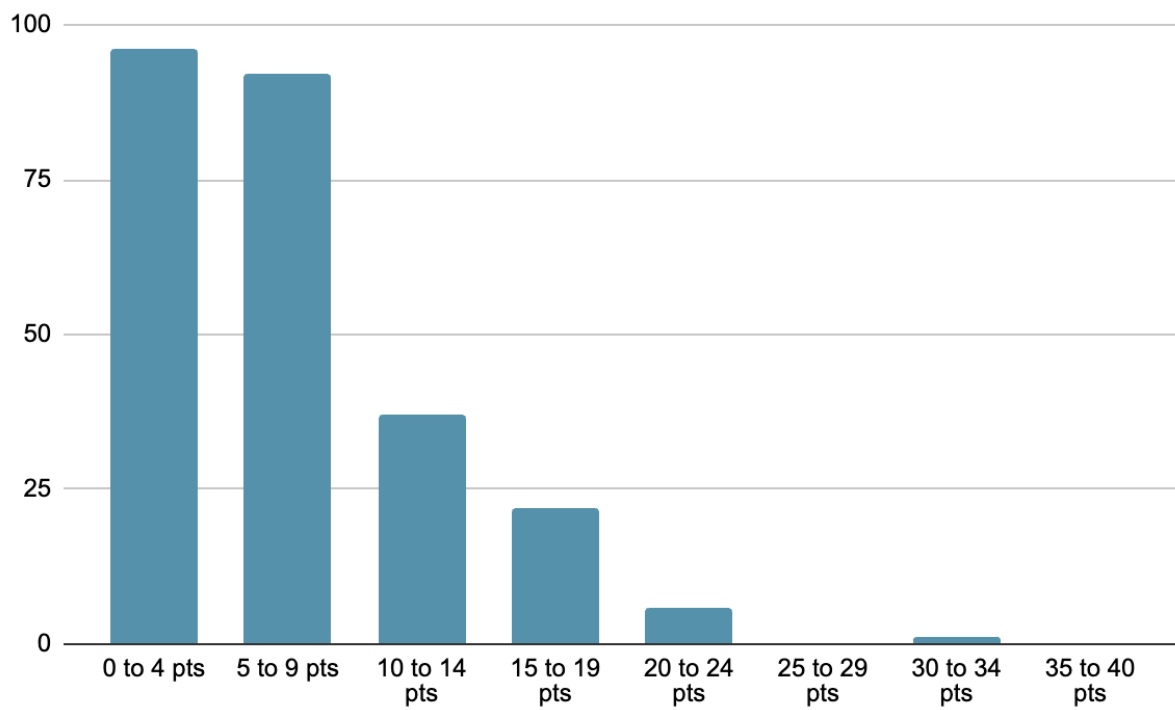
Third Quartile: 10

Minimum: 0

Maximum: 33

Mode: 4

Standard Deviation: 5.3



## Accuracy Round

The Accuracy Round was a 10-problem, 45-minute exam. Problem weights are listed below.

Problem	1	2	3	4	5	6	7	8	9	10
Weight	3	3	4	4	5	6	8	8	9	10

### In-Person

Mean: 7.3

First Quartile: 3

Median: 6

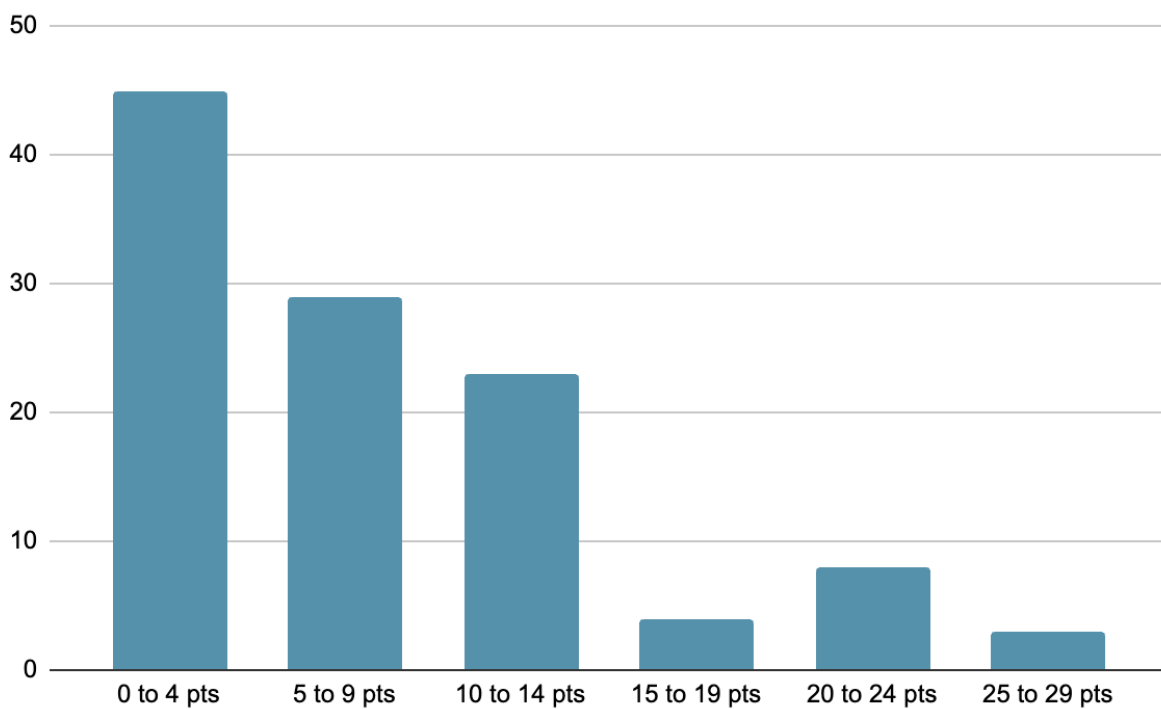
Third Quartile: 10.3

Minimum: 0

Maximum: 28

Mode: 0

Standard Deviation: 6.7



## Virtual

Mean: 8.3

First Quartile: 3

Median: 7

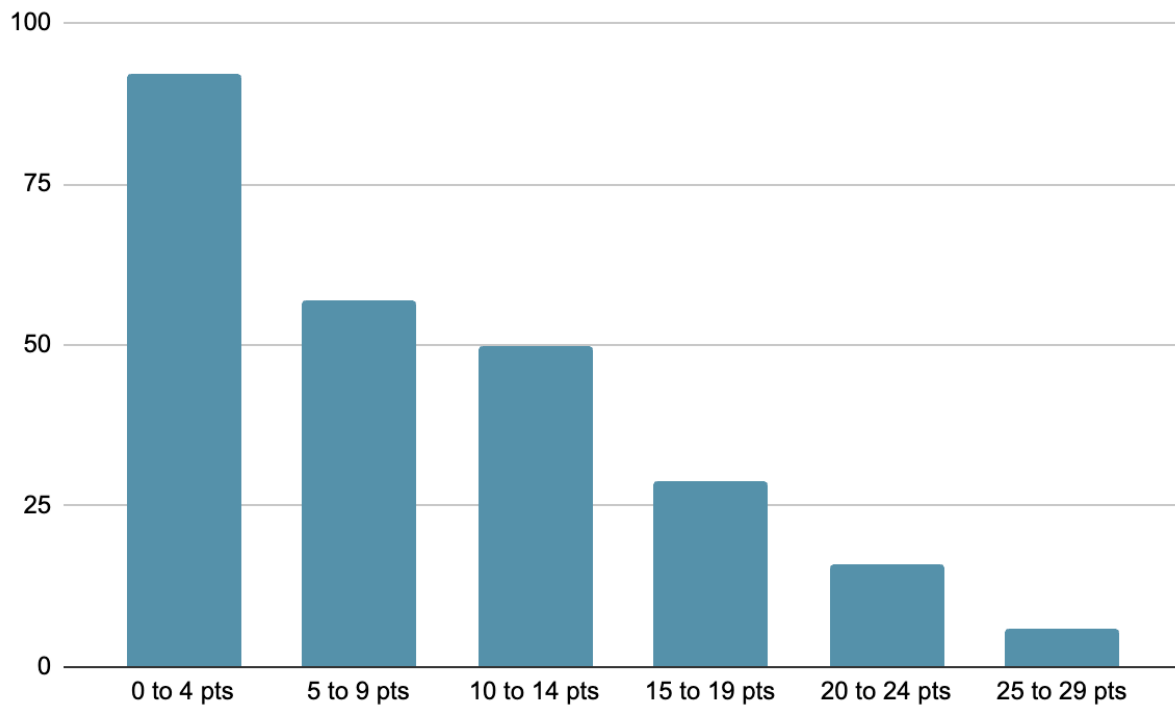
Third Quartile: 11.8

Minimum: 0

Maximum: 25

Mode: 3

Standard Deviation: 6.6

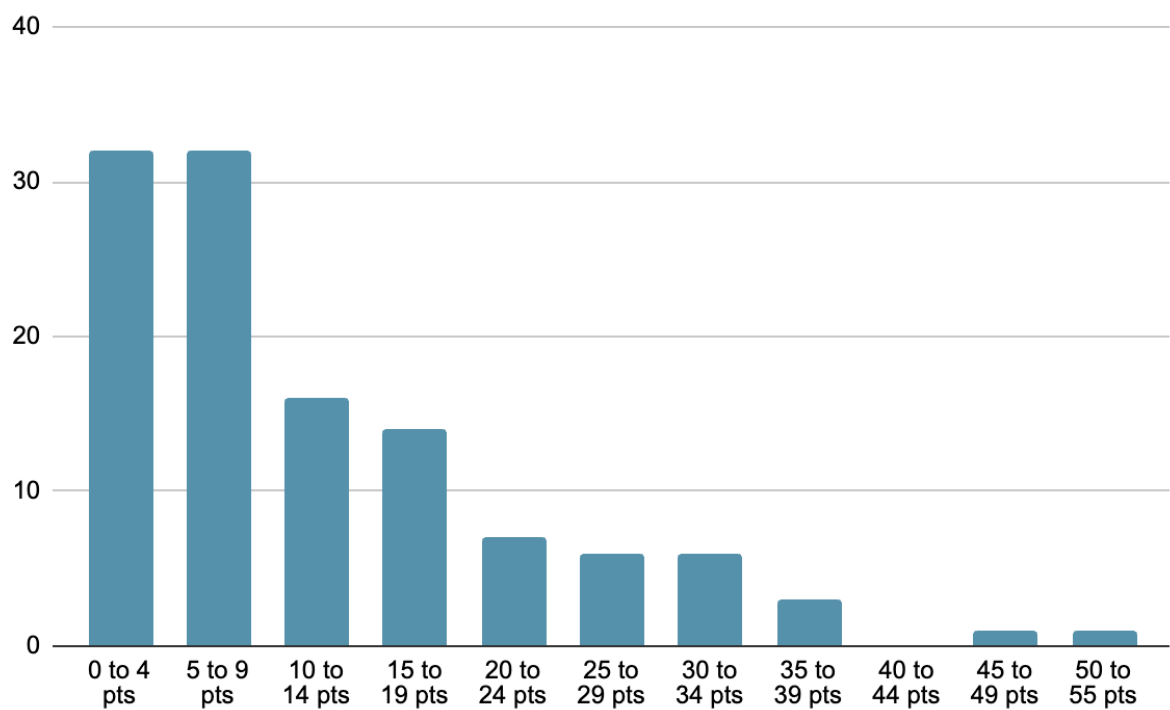


# Individual Total

The Individual Total score for each competitor is the sum of speed and accuracy scores.

## In-Person

Mean: 12.3	Minimum: 0
First Quartile: 4	Maximum: 55
Median: 9	Mode: 2
Third Quartile: 17	Standard Deviation: 10.7



## Virtual

Mean: 14.9

First Quartile: 7

Median: 13

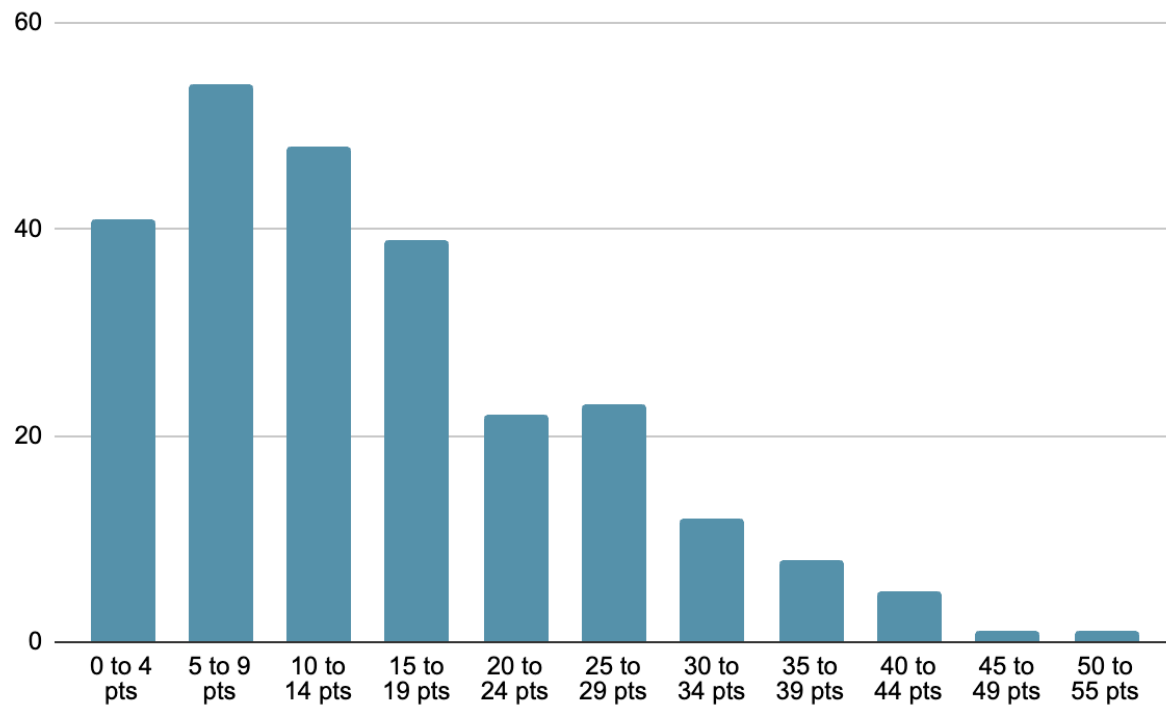
Third Quartile: 21

Minimum: 0

Maximum: 55

Mode: 7

Standard Deviation: 10.7



## Team Round

The Team Round was a 15-problem, 40-minute exam. Problem weights are listed below.

Problem	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Weight	5	10	10	15	15	20	20	25	30	35	35	40	45	45	50

### In-Person

Mean: 47.7

First Quartile: 22.5

Median: 40

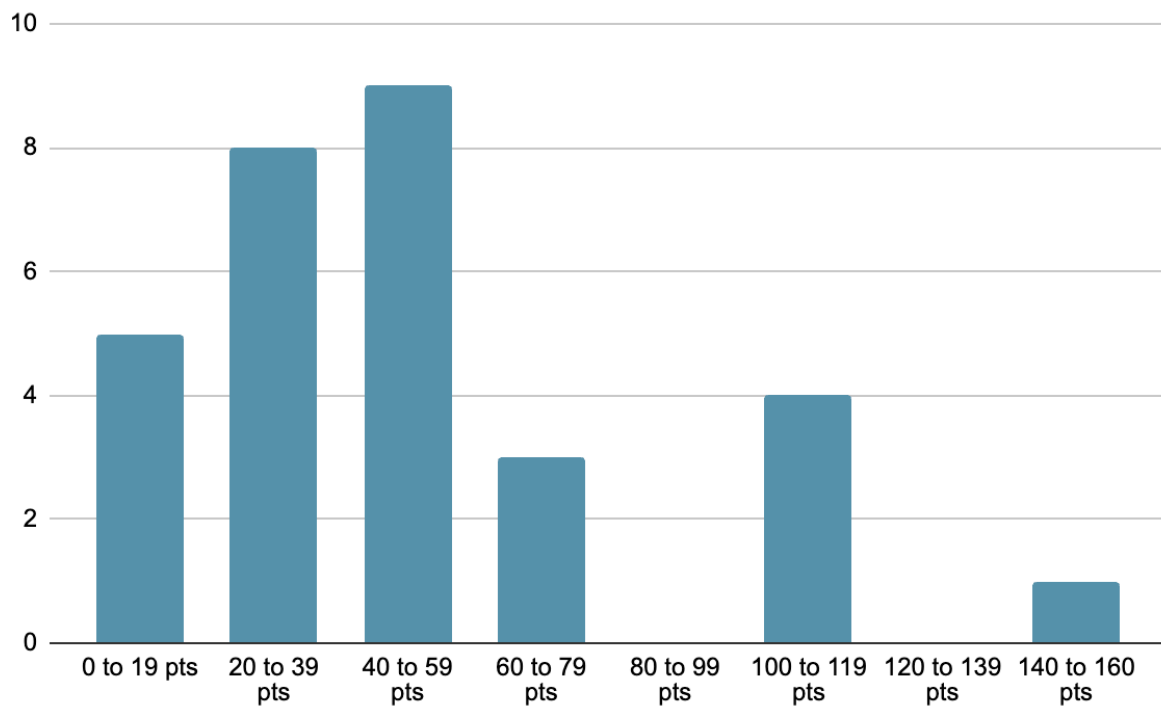
Third Quartile: 58.8

Minimum: 10

Maximum: 145

Mode: 40

Standard Deviation: 34.4





## Virtual

Mean: 50.4

First Quartile: 25

Median: 40

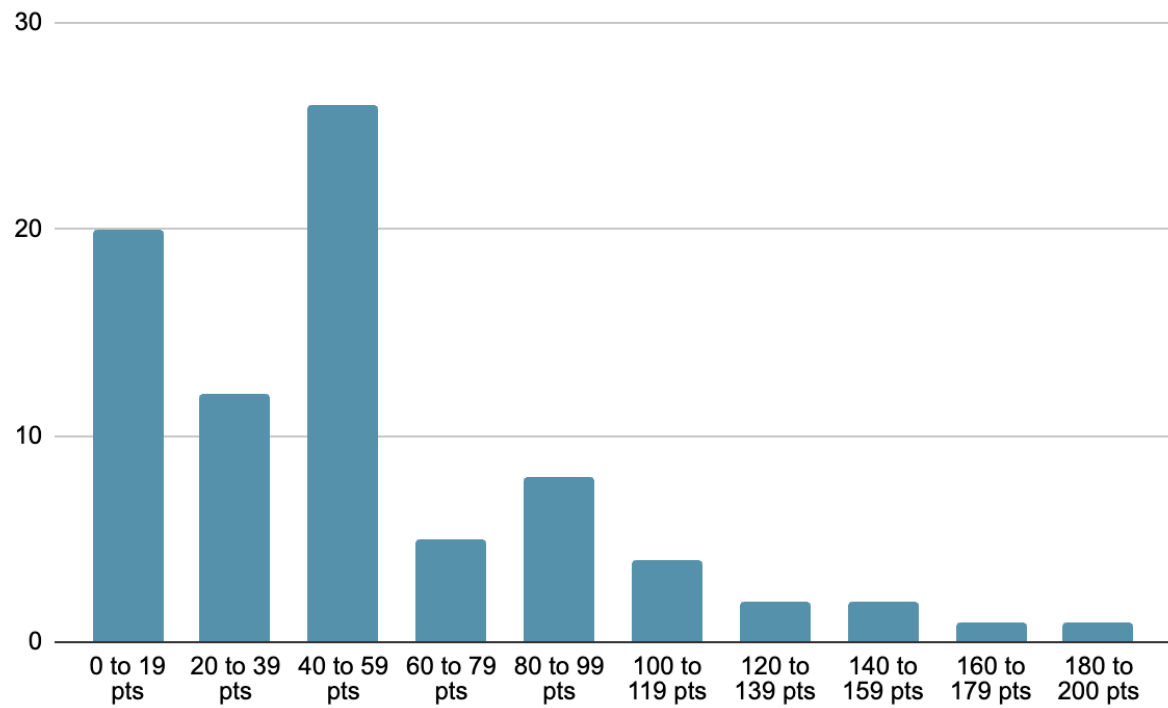
Third Quartile: 75

Minimum: 0

Maximum: 195

Mode: 55

Standard Deviation: 40.0



## Gunga Bowl

The Gunga Bowl was a 27-problem (9 rounds of 3 problems each), 60-minute exam. Problem weights are listed below.

Round	1	2	3	4	5	6	7	8	9
Weight	8	10	12	14	16	18	20	22	30

### In-Person

Mean: 88.1

First Quartile: 61.5

Median: 71

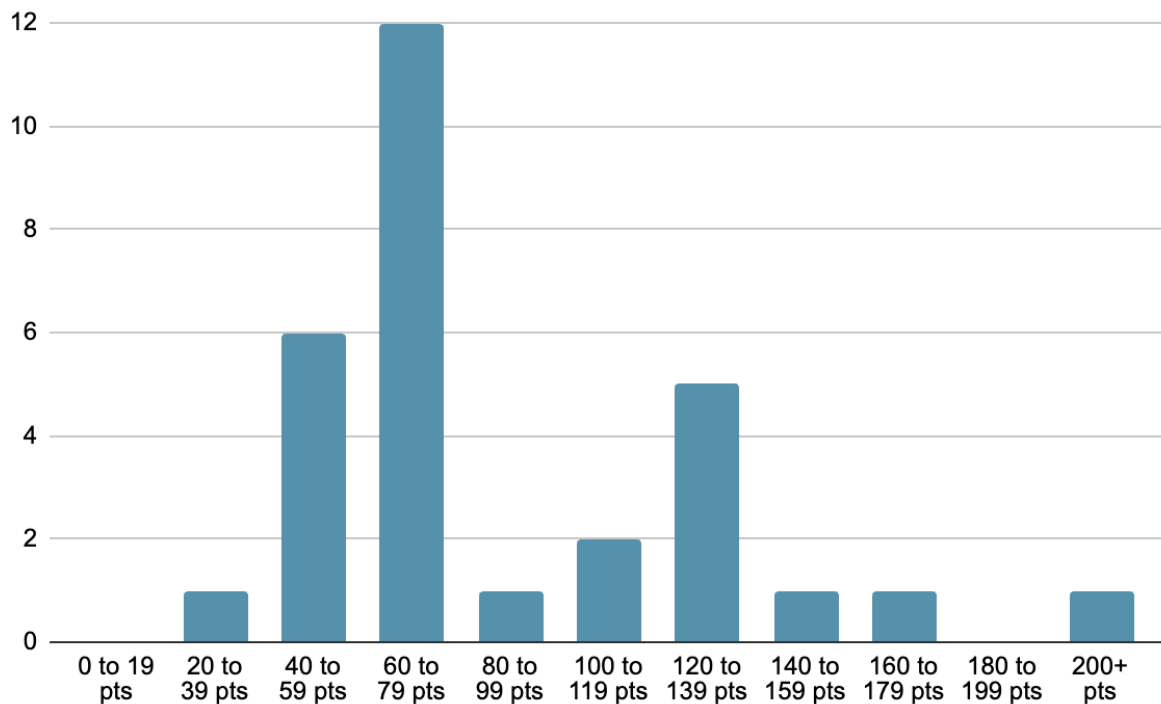
Third Quartile: 120

Minimum: 35

Maximum: 206

Mode: 74

Standard Deviation: 42.8



## Virtual

Mean: 79.2

First Quartile: 38

Median: 69

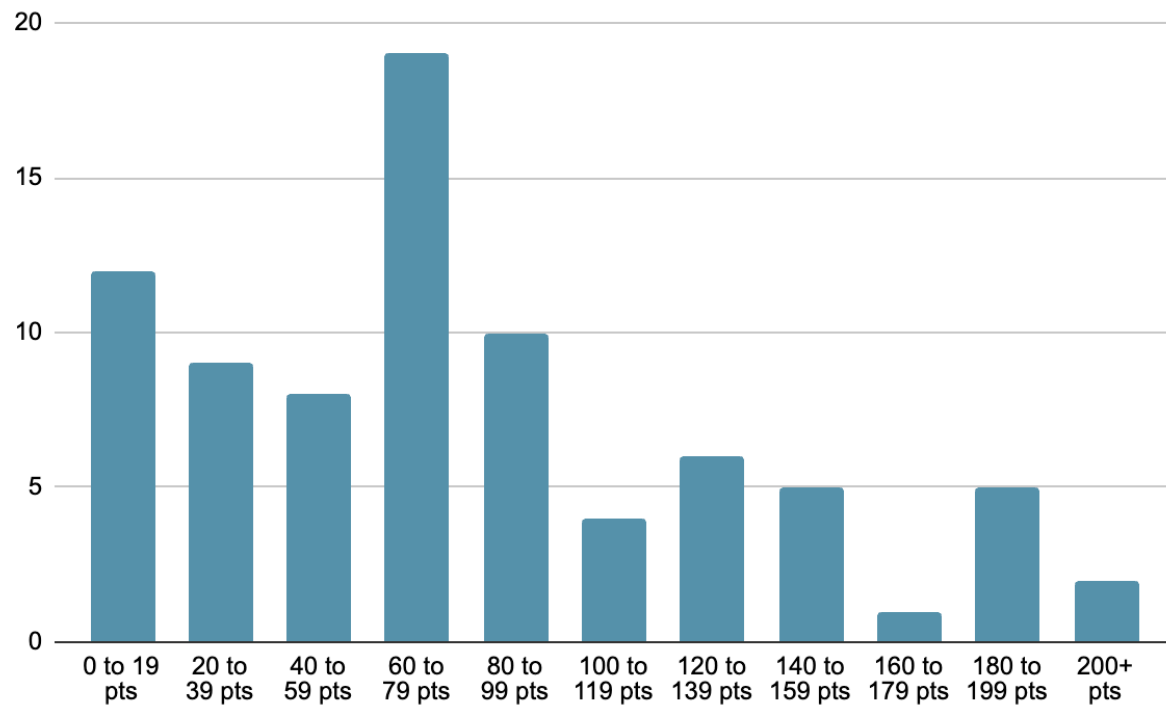
Third Quartile: 106

Minimum: 0

Maximum: 247

Mode: 0

Standard Deviation: 57.8



## Team Sweepstakes

The Team Sweepstakes score is the sum of each team's Individual Total scores, the Team Round score, and the Gunga Bowl score.

### In-Person

Mean: 188.2

Minimum: 60

First Quartile: 118.8

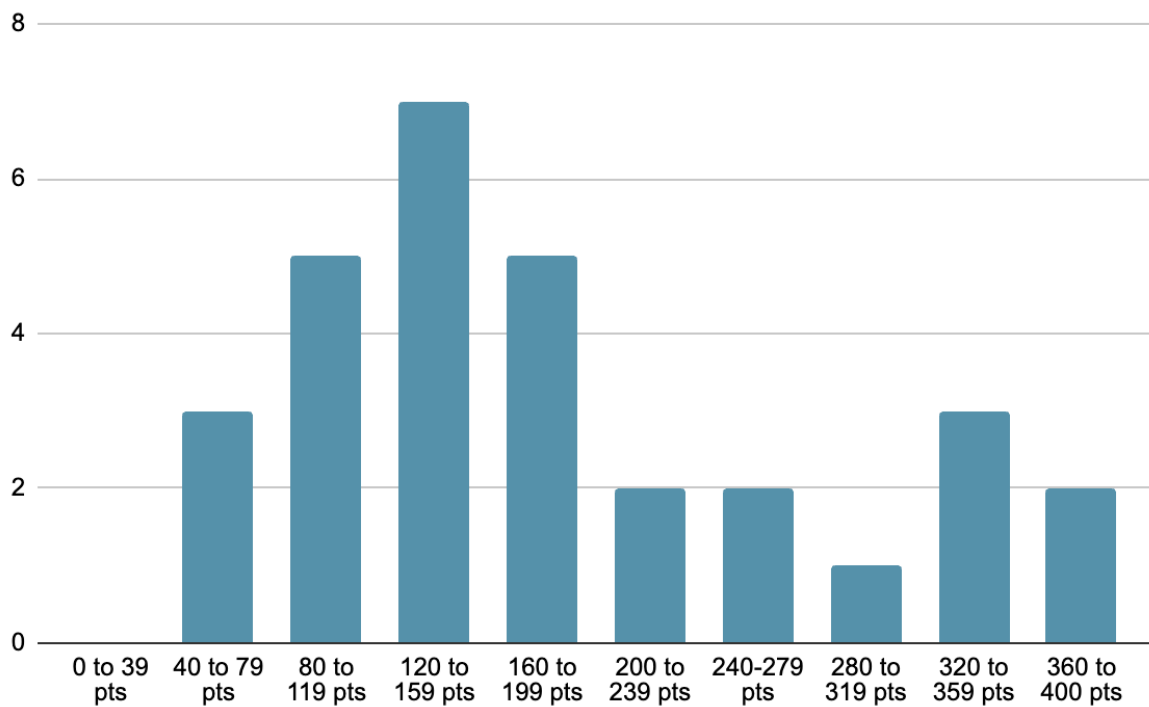
Maximum: 468

Median: 158.5

Mode: N/A

Third Quartile: 239

Standard Deviation: 103.2



## Virtual

Mean: 162.6

First Quartile: 79

Median: 130

Third Quartile: 219

Minimum: 5

Maximum: 589

Mode: 109

Standard Deviation: 117.7

