THE IMBALANCE OF THE FENCING RATING SYSTEM

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EXPLANATIONS

In fencing, there are five ratings: A, B, C, D, and E

Ratings are given to the highest placing fencers at each competition; classification determines how many ratings are given

Competitions are classified by:

- Number of competitors
- Ratings of competitors
- Final ranking of raters

EXPLANATIONS (cont.)

REGION II:
North Dakota, South Dakota, Nebraska, Minnesota, Kentucky, Missouri, Wisconsin, Illinois, Indiana, Ohio, Michigan, Iowa

REGION I:
Washington, Oregon, Idaho, Montana, Wyoming

REGION III:
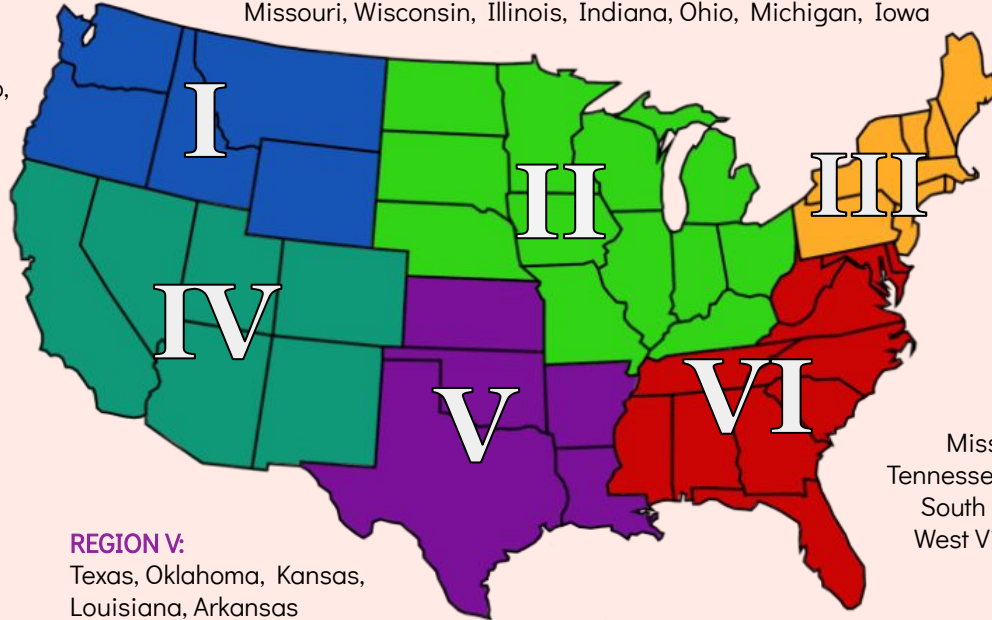Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania

REGION IV:
California, Nevada, Utah, Arizona, New Mexico, Colorado

REGION V:
Florida, Georgia, Mississippi, Alabama, Tennessee, North Carolina, South Carolina, Virginia, West Virginia, Maryland, Delaware

REGION V:
Texas, Oklahoma, Kansas, Louisiana, Arkansas

INTRODUCTION

Ratings are very important to fencers.

Different regions = different pool of competitors → Rating attainability changes based on region.

Main Question: Which region has the highest chance of rewarding a rating to fencers?

Competitions give more ratings with more fencers attending.

Many raters + relatively less skilled raters → easier to gain rating.

OBJECTIVE & HYPOTHESIS

Objective: determine the region with the highest chance of rewarding a rating to a fencer eligible for Cadet Women's Épée.

Hypothesis: If different regions offer different chances for earning a rating, then region one – an area in the north-west – would not be the easiest to gain a rating in because the sheer lack of fencers limits the ratings that can be gained.

ASSUMPTIONS

The attainability of ratings differs for fencers based on region

- Most competitions are contained within one region

- Most ratings are gained through regional competitions

National rolling point totals accurately indicate each fencer's skill in relation to others around the entire country

MATERIALS, EQUIPMENT, FACILITIES

This research was conducted without the use of scientific equipment or facilities

Statistics were gathered from the official USA Fencing website (usafencing.org)

PROCEDURE

Finding Ratings:

Ratings of each fencer were found through spreadsheet from USA Fencing website

Number of raters were totaled based on region

Finding Relative Skill Levels:

National rolling point totals of each fencer in Cadet Women's Épée was found

Region of each fencer was searched, points added to region's national points

Number of competitive Cadet Women's Épée fencers was gathered (per region)

Region's points divided by the number of fencers in that region

DATA

Chart displays number of ratings in each region

	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6
A	0	1	18	6	11	4
B	1	4	10	12	6	7
C	2	6	17	18	9	9
D	1	7	19	15	8	14
E	1	7	32	15	5	23
Total	5	25	96	66	39	57

DATA (cont.)

Chart displays number of fencers, national rolling point totals, and quotient

	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6
Fencers	12	41	102	118	50	71
Points	0.00	1935.00	15726.52	7953.50	8646.00	4395.00
Final	0.00	47.20	154.18	67.40	172.92	61.90

DATA ANALYSIS

Region 1: lowest comparative skill level, but too few raters

Region 5: highest relative skill level with somewhat few raters, making it harder to gain a rating.

Region 4: highest rating : skill ratio + enough fencers for there to be no limitation on event classification → region with highest chance of rewarding a rating

	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6
Raters	5	25	96	66	39	57
Skill	0.00	47.20	154.18	67.40	172.92	61.90

CONCLUSION

Question: Which region is the easiest to earn a rating in for Cadet Women's Epee fencers?

Region 4 had highest raters : skill level ratio → Region 4 has the highest likelihood for granting a rating to a Cadet Women's Epee fencer.

Ratings + skill levels of each region greatly differed, so there is a big difference for the chances of earning a rating in each region.

This means that ratings shouldn't be referred to when comparing fencers from different regions.

PLANS FOR FURTHER RESEARCH

I want to **automate** this process for updated results.

I plan to find a way of **verifying the results** of this experiment.

Plan to find new **fencing** related topics to research.

SOURCES

USA Fencing, http://usafencing.org. Accessed 19 May 2023.

"Fencing Links." *Olympia Fencing Center*, 8 October 2022,

https://olympiafencingcenter.com/fencing-links/. Accessed 19 May 2023.

THANK YOU!