

p-Beauty contest

- *Without communicating with each other*, each student must write a real number x_i in $[0, 100]$ in the form provided.
- I will compute the average of the numbers:

$$\bar{x} = \frac{1}{N} \sum_{i=1}^N x_i$$

- Those students whose numbers are close enough (in absolute value) to **two thirds** of the mean will receive 1 extra point over their *final grade*.
- Formally, you will receive an extra point if and only if:

$$\left| x_i - \frac{2}{3} \bar{x} \right| < 2.5$$

Results

- On the first week the criteria increased to an interval of length 20 and there were 10 winners.
- On the second week the criteria increased to an interval of length 10 and there were 11 winners.
- On the third week the criteria increased to an interval of length 8 and there were 15 winners.
- On the fourth week the criteria increased to an interval of length 6 and there were 17 winners.
- The following tables show frequencies and descriptive statistics of the results.

<i>range</i>	[0,10)	[10,20)	[20,30)	[30,40)	[40,50)	[50,60)	[60,70)	[70,80)	[80,90)	[90,100]
<i>week 1</i>	1	3	8	2	5	21	3	3	0	1
<i>week 2</i>	2	14	10	4	2	5	1	3	4	0
<i>week 3</i>	6	18	9	0	2	4	0	0	0	0
<i>week 4</i>	13	20	13	4	0	0	0	1	0	0

	\bar{x}	$\frac{2}{3}\bar{x}$	range	winners	max	min	mode	median
<i>week 1</i>	44.11	29.41	[19.41, 39.41]	10	95	0.25	50	50
<i>week 2</i>	34.27	22.84	[17.84, 27.84]	11	85	8	17	23
<i>week 3</i>	20.13	13.42	[9.42, 16.42]	15	56	0	8	17
<i>week 4</i>	15.69	10.46	[7.46, 13.46]	23	35	5	15	15