

Analiza rozkladu empirycznego

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Task 1 The table below shows the viewership of different seasons of Game of Thrones. Using that information, answer the questions below

Season episode	1	2	3	4	5	6	7	8	9	10
1	2.22	2.2	2.44	2.45	2.58	2.44	2.4	2.72	2.66	3.04
2	3.86	3.76	3.77	3.65	3.9	3.88	3.69	3.86	3.38	4.2
3	4.37	4.27	4.72	4.87	5.35	5.5	4.84	5.13	5.22	5.39
4	6.64	6.31	6.59	6.95	7.16	6.4	7.2	7.17	6.95	7.09
5	8	6.81	6.71	6.82	6.56	6.24	5.4	7.01	7.14	8.11
6	7.94	7.29	7.28	7.82	7.89	6.71	7.8	7.6	7.66	8.89
7	10.11	9.27	9.25	10.17	10.72	10.24	12.07			

Source: Wikipedia

- Compute the means and the coefficients of variation for season 1 and 6. What can you say about viewership changes in those seasons?
- Draw a histogram using 5 equally spaced bins.
- Compare the mean in the grouped version and in the individual version. Are they the same? Why?

Task 2 The table below shows the percentiles of weight of chinese babies at birth after a 40-week gestation period.

Percentile	P3	P5	P10	P25	P50	P75	P90	P95	P97
Boys	2704	2783	2908	3127	3382	3652	3907	4065	4171
Girls	2627	2703	2824	3035	3281	3541	3787	3940	4042

Source: Li Dai, Changfei Deng, Yanhua Li, Jun Zhu, Yi Mu, Ying Deng, Meng Mao, Yanping Wang, Qi Li, Shuangge Ma, Xiaomei Ma, Yawei Zhang; *Birth Weight Reference Percentiles for Chinese*, PLoS One. 2014; 9(8)

- Compute the mean weight at birth and the standard deviation for boys and girls.
- Knowing that the number of boys is 205506 and the number of girls is 183982, please obtain the overall mean for all babies.