

Analiza rozkładu empirycznego II

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Task 1: World Cup Some students provided a solution using quartile methods, and that is ok. I try also to use the traditional (or classical) measures as well. There are some differences in the results

(a) Table of frequencies (It can also be in vertical form :))

(b) The descriptive statistics are

- Mean = 2.875
- Variance = 2.86 – SD = 1.69
- Skewness (Classical measure) = 1.33

(c) to check whether the observation is an outlier, we standardize the value of x first.

$$z_i = \frac{x_i - \bar{x}}{sd(x)} = \frac{7 - 2.875}{1.69} = 2.44$$

Since this number is smaller than 3 in absolute values, we conclude that the observation is not an outlier.

We should note that using quartile based measures, the results were different (see task by other students). You should be careful then when deciding for a measure.

Task 2: Commuting time See the work by other students.

Goals	0	1	2	3	4	5	6	7
# matches	0	2	8	2	1	1	1	1