

Mathematical Statistics 2017/2018, Homework 1

Name and Surname Student's number

In the problems below, please use the following: as k – the sum of digits in your student's number; as m – the largest digit in your student's number; and as n – the smallest digit in your student's number plus 1. Please write down the solutions (transformations, substitutions etc.), and additionally provide the final answer in the space specified (the answer should be a number in decimal notation, rounded to four digits).

1. The growth of average wages between the year $2000 + m$ and 2017 was analyzed. Between $2000 + m$ and 2014, the wages increased by $k\%$. In 2015, they decreased by $n\%$ with respect to the 2014 level. In the period 2015-2017, they increased by $m\%$ yearly. (1) Calculate the average yearly growth rate of wages for the studied period. (2) Knowing that in 2017 the average wage level was equal to m thousand crowns, predict the average wage level in the year $2019 + n$ (assume that in the future, the wages will grow at the same rate as on average in the analyzed period).

ANSWER: Avg. growth rate: Predicted wage:

Solution: