# EoS - E-tutorial 01 - WiSe 2023/2024

StatRef.A.2.2.00013 (60 Punkte)

Sie haben die folgende Antwort gegeben:

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The public health department in Trier conducts a survey on the state of health of the citizens. Among other things, the weight (in kg) of 300 people was recorded. To facilitate the analysis, the collected data should be divided into six classes. The results of the survey are contained in the dataset you find below the table. Download the dataset and load it into R. Group the data according to the following table:

**Hint:** Please round your results - if needed and not demanded otherwise - to **four** decimal places.

| j | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Weight in kg | 40 t.u. 50 | 50 t.u. 62.5 | 62.5 t.u. 75 | 75 t.u. 87.5 | 87.5 t.u. 100 | 100 t.u. 130 |

**il_qst_32698**

il_qst_32698.RData (2.44 KB)

a) (20 points) Calculate the **approximate** arithmetic mean for the weight using your previously classified data. 69.6875 ✗

b) (26 points) Now calculate the **approximate** variance for the weight using your previously classified data. 182.0638 ✗

c) (14 points) Furthermore, calculate the **approximate** 0.25-quantile on the basis of the classified data by using a linear interpolation. 59.3284 ✓

Die bestmögliche Lösung lautet:

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The public health department in Trier conducts a survey on the state of health of the citizens. Among other things, the weight (in kg) of 300 people was recorded. To facilitate the analysis, the collected data should be divided into six classes. The results of the survey are contained in the dataset you find below the table. Download the dataset and load it into R. Group the data according to the following table:

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|---|---|---|---|---|---|---|
| Weight in kg | 40 t.u. 50 | 50 t.u. 62.5 | 62.5 t.u. 75 | 75 t.u. 87.5 | 87.5 t.u. 100 | 100 t.u. 130 |

**il_qst_32698**

il_qst_32698.RData (2.44 KB)

a) (20 points) Calculate the **approximate** arithmetic mean for the weight using your previously classified data. 70.7833333333333

b) (26 points) Now calculate the **approximate** variance for the weight using your previously classified data. 241.938472222222

c) (14 points) Furthermore, calculate the **approximate** 0.25-quantile on the basis of the classified data by using a linear interpolation. 59.3283582089552

Sie haben 14 von 60 möglichen Punkten erreicht.