# Exercise sheet ERM 7: Descriptive statistics and diagrams

**Use the data set „Beispieldatensatz\_A3“.**

* 1. Calculate with SPSS median, mean and mode of the variable „alter“.

Median:

Mode:

Mean:

* What is an advantage of the medians compared to the mean?
  1. Calculate in SPSS standard deviation and variance of the variable „alter“.

Standard deviation:

Variance:

* How do standard deviation and variance relate to each other?
  1. Calculate in SPSS absolute and relative frequencies of the variable „sex“.

|  |  |  |
| --- | --- | --- |
| **sex** | **männlich** | **weiblich** |
| Absolute frequency |  |  |
| Relative frequency |  |  |

* Why should you not calculate mean and median for the variable „sex“?
  1. Calculate (without SPSS) median, mode, and mean for these data. Fill in the data into the diagram and mark median, mode, and mean.

|  |  |
| --- | --- |
| Data: 4, 9, 6, 5, 2, 3, 4, 2, 1, 7, 1, 2, 4, 4, 5, 6, 8  Median:  Mode:  Mean: |  |

|  |  |
| --- | --- |
| Data: 4, 1, 3, 2, 4, 5, 2, 6, 4, 2, 3, 6  Median:  Mode:  Mean: |  |

* 1. Calculate (without SPSS) absolute and relative frequencies of these university grades:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Grade** | **1.0** | **1.3** | **2.7** | **4.0** |
| Number of students with this grade | IIII | II | IIII | I |
| Absolute frequency |  |  |  |  |
| Relative frequency |  |  |  |  |

* 1. Name and describe at least three different types of diagrams. When do you use which one?