Rules when working with approximate numbers

The order of the error depends on the accuracy of both the initial data and the intermediate results.

The approximate number of the initial data is derived with the biggest error which defines the error of the result. For example, let it be in the k-th digit after the decimal point.

- The other initial data can be approximated with an accuracy of one or two decimal digits more than k.
- All intermediate results can be completed with one or two decimal digits after k.
- If possible avoid the subtraction of close numbers as well as dividing by numbers close to 0.
- The result is approximated to an accuracy of the k - digit after the decimal point if there is no other type of error – in the numerical method, for example.

Note. Be very careful with mathematical, physics or other constants which must be shown with the largest accuracy possible. For example replacing $\pi = 3,14$ can actually lower the accuracy of the result to two decimal digits after the decimal point even if you are working with a double accuracy of the other data.