

1. Properly typeset the following command and properly refer to it in the text

$$\left( \sum_{i_1, \dots, i_m} a_{i_1, \dots, i_m}^{2m} m + 1^{\frac{m+1}{2m}} \leq C \sup \left\{ \left| \sum_{i_1, \dots, i_m} a_{i_1, \dots, i_m} x_{i_1}^1 \dots x_{i_m}^m \right| : \|(x_i^k)_{i=1}^n\|_\infty \leq 1, 1 \leq k \leq m \right\} \right),$$

2. Properly typeset the expression: *Rez.*
3. Properly typeset indexes in the following sum:

$$f(x) = \sum_{n=0, k=2}^{\infty} a_n^k$$

4. Properly typeset the following theorem

**Theorem 1** (Cauchy–Hadamard) *The radius of convergence  $R$  of the power series*

$$\sum_{n=0}^{\infty} a_n (z - z_0)^n \quad |z - z_0| < R$$

*can be calculated via the following formula*

$$\frac{1}{R} = \limsup_{n \rightarrow \infty} \sqrt[n]{|a_n|}.$$

**Definition 2.** (Prime numbers) A number is called prime, if it is not compound.

5. Typeset the following matrix (display-style):

$$\begin{Bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{Bmatrix}$$

and in the text

$$\begin{Bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{Bmatrix}$$

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