

Übungen in Analysis  $\diamond$  Exercices en analyse  $\diamond$  Type B2  $\diamond$  I / 9

---

**Probl. 1**  $\langle a_n \rangle = \left\langle \frac{\sin(3\pi + \frac{4}{5}n^2)}{n^2} \right\rangle \rightsquigarrow a_n \rightarrow ?$

**Probl. 2**  $\langle a_n \rangle = \left\langle \frac{n^2 - 2n + 5}{n^3 + n^2 + 1} \right\rangle \rightsquigarrow a_n \rightarrow ?$

**Probl. 3**  $\langle a_n \rangle = \left\langle \frac{\ln(n)}{n^2} \right\rangle \rightsquigarrow a_n \rightarrow ?$

Hinweis: Skizze! • *Indication: Exquisse!*  $\rightsquigarrow \ln(n), n$

**Probl. 4**  $\langle a_n \rangle = \left\langle \left(1 + \frac{1}{n} + \frac{1}{n^2}\right) \cdot \left(5 + \frac{2+n}{n}\right) \right\rangle \rightsquigarrow a_n \rightarrow ?$

**Probl. 5**  $\langle a_n \rangle = \left\langle e^{\sin(\pi + \frac{1}{n})} \right\rangle \rightsquigarrow a_n \rightarrow ?$