

One of the following questions will serve as a problem in quiz 1:

1. Prove that if $\lim_{n \rightarrow \infty} |a_n| = 0$, then $\lim_{n \rightarrow \infty} a_n = 0$.
2. Formulate the squeeze theorem for sequences.
3. Formulate the monotonic sequence theorem.
4. Write the formula for the sum of geometric series.
5. Prove that if the series $\sum_{n=1}^{\infty} a_n$ is convergent, then $\lim_{n \rightarrow \infty} a_n = 0$.
6. Formulate the test for divergence.
7. Formulate the integral test.
8. Formulate the p -test.
9. Formulate the comparison test.
10. Formulate the limit comparison test.
11. Formulate the alternating series test.
12. Prove that if a series is absolutely convergent, then it is convergent.
13. Formulate the ratio test.
14. Write the Taylor formula.