QUIZ 10 $\qquad$ **Time: 10min**

Fill in the blanks

1. The geometric series $a + ar + ar^2 + \ldots$ converges if ———; in this case the sum of the series is ———-.

2. If $\lim_{n \to \infty} a_n \neq 0$ we can be sure that the series $\sum_{i=1}^{\infty} a_n$ ———.

3. The insertion or removal of a few terms from a series does not effect its ———, although it may effect its sum.

4. Let $\rho = \lim_{n \to \infty} \frac{a_{n+1}}{a_n}$. The ratio test says that the series $\sum_{n=1}^{\infty} a_n$ converges if ———, diverges if ———.

5. $\sum(3^k/k!)$ is an obvious candidate for the ———- Test, whereas $\sum k/(k^3 - k - 1)$ is an obvious candidate for the ——— Test.