

Homework 21 (Chap. 11.4), 67.00/80.00 (83.75%)

April 5, 2020

Problem 24 score: 10/10

good

Problem 32 score: 9/10¹

why $\max(\sqrt[p]{n}) = \sqrt{2}$?

Problem 38 score: 6/10²

In $p > 1$, the writing $\forall n$ is incorrect (does not hold, e.g. for $n = 2$, since $\ln 2 < 1$).

In $p = 1$ you did not check hypothesis of Integral test (e.g. continuity and monotonicity).

In $p < 1$ what you have written is **wrong**. Why $\frac{1}{\ln n} > \frac{1}{n^{\frac{p-1}{2}}}$ for big n ?
(note that $\frac{p-1}{2} < 0$ when $p < 1$)

Problem 39 score: 10/10

good

Problem 40 score: 10/10

(a) good

(b) good

Problem 41 score: 10/10

(a) good

(b) good

¹similar problems: 33,34

²similar problems: 36,37

Problem 43 score: 2/10

Why do you claim that “for large numbers n $\{na_n\}$ is approaching some limit L ”? What if this sequence has NO limit?

Problem 45 score: 10/10

good