Artin-Whaples approximations

Theorem 1 (Artin-Whaples approximations)**.** Let K be a field, and let $v_1, v_2, \dots, v_n$ be pairwise inequivalent nontrivial absolute values on K. For any $a_1, a_2, \dots, a_n \in K$ and any $\varepsilon > 0$, there exists an element $x \in K$ such that

$$|x - a_i|_{v_i} < \varepsilon$$

for all $1 \leq i \leq n$. Yang: To be checked.

Appendix

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