Erratum: On the complete ordered field

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October 6, 2018

Lemma 2.4.13 (p40). *Proof of iii.* We assume that $l > 0$, the case $l = 0$ is treated and the case $l < 0$ follows as stated. Using *ii* take $k > 0$ such that $\lambda((k-1)a) \leq l \leq \lambda(ka)$. Using that for all $x \in \mathbb{Z}$ we have

$$|\lambda(x+1) - \lambda(x)| \leq |\lambda(1)| + 1$$

it follows that for all $0 \leq i \leq a-1$ we have $|\lambda((k-1)a+i+1) - \lambda((k-1)a+i)| \leq |\lambda(1)| + 1$. Since $\lambda((k-1)a) \leq l \leq \lambda(ka)$, there exists $0 \leq i \leq a-1$ such that $\lambda((k-1)a+i) \leq l \leq \lambda((k-1)a+i+1)$, and set $n_l = (k-1)a+i$.
Many thanks to Zafer Ercan for pointing out this mistake.