Exercises

E7.59 [OFX]Prerequisites:[O9N].Note:*From the written exam of March 27, 2010.*.Say for which $\alpha \in \mathbb{R}$ the series

$$\sum_{(m,n)\in\mathbb{N}^2} \frac{1}{(n+m+1)^\alpha} \quad .$$

converges. Then discuss, for $N \geq 3$, the convergence of

$$\sum_{(m_1,\dots m_N)\in\mathbb{N}^N} \frac{1}{(1+m_1+\dots+m_N)^\alpha} \quad .$$

Solution 1. *[OFY]*