

SUM FUNCTIONS

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Abstract: Motivated by a problem about reversibility in groups of formal power series, I have been thinking about sums such as

$$1 + 1 + 1 + 1 + \dots,$$

$$1 + (1 + 1) + (1 + 1 + 1) + (1 + 1 + 1 + 1) \dots,$$

$$1 + (1 + (1 + 1)) + (1 + (1 + 1) + (1 + 1 + 1)) + \dots,$$

...

where $1 = 1_K$ is the multiplicative identity in an integral domain K . I will talk about this and related matters.