

Corrections to Article 16.5.5

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We apologize for a mistake in the example in part (III) of Remark 9. Therefore, we shall make the following corrections.

1. Equation (14) in Theorem 8 should be

$$\binom{m+n}{r}_b = \sum_{k=0}^r \binom{m}{k}_b \binom{n}{r-k}_b.$$

2. At the end of the proof of Theorem 8, the following paragraph should be added:

Note that the summation condition $0 \leq k \lesssim_b r$ can be replaced by $0 \leq k \leq r$, since when $k + (r - k)$ is not carry-free, it means that $k_j > r_j$ for some $j \in \{0, \dots, N-1\}$. In this case,

$$\binom{n}{r-k}_b = \left(\prod_{l=0}^{j-1} \binom{n_l}{r_l - k_l} \right) \binom{n_j}{r_j - k_j} \left(\prod_{l=j+1}^{N-1} \binom{n_l}{r_l - k_l} \right) = 0,$$

and the corresponding term has no contribution to the sum.

3. Part (III) of Remark 9 should be removed.