# ERRATA & COMMENTS
# COMBINATORIAL RECIPROCITY THEOREMS

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p. 6 Proof of Proposition 1.1.3: the inequalities should go the other way.

p. 25 Exercise 1.15 (b): the word "nowhere-zero" needs to be removed.

p. 32 Exercise 2.5 asserts that the sum on the right stops at the index $k = |\Pi|$, but this is a bit crude: the sum actually stops at the length of the longest chain in $\Pi$.

p. 38 Theorem 2.3.2: The exponent should be the length of $\Pi$ (instead of $|\Pi|$) .

p. 39 The last binomial coefficient on p. 39 should have a $-1$ at the end instead of the $+1$. The same corrections should be made on top of p. 40.

p. 42 In the last displayed math line, the exponent should be $\kappa$, not $c$.

p. 44 In the proof of Theorem 2.4.5, "if $I = I_S$" should be replaced by "if $I = J_S$" in the definition of $F_=$.

p. 44 Just before Theorem 2.4.6, it should say $a = a_0 \prec a_1 \prec \cdots \prec a_k = b$.

p. 49 Exercise 2.16: The $I$ in the exponent should be a $J$.

p. 82 In the proof of Proposition 3.5.2, $T_{\mathbf{q}}(\mathsf{Q}) = T_{\mathbf{q}-\mathbf{r}}(\mathsf{Q}-\mathbf{r})$ should be $T_{\mathbf{q}}(\mathsf{Q}) = T_{\mathbf{q}-\mathbf{r}}(\mathsf{Q}-\mathbf{r}) + \mathbf{r}$.

p. 90 In the proof of Theorem 3.6.4, $r(B)$ and $b(B)$ should be $r(\mathscr{H})$ and $b(\mathscr{H})$.

p. 95 Exercise 3.2: the second sentence is incomplete. The correct statement is, an irredundant presentation is a set $I \subseteq [m]$ such that $\mathsf{Q} = \bigcap_{i\in I} \mathsf{H}_i^{\leq}$ but $\mathsf{Q} \neq \bigcap_{i\in J} \mathsf{H}_i^{\leq}$ for any proper subset $J \subset I$.

p. 96 Exercise 3.4(b) should read $\mathbf{p} + \mathbb{R}_{\geq 0}\mathbf{u} \subseteq \mathsf{Q}$ for all $\mathbf{p} \in \mathsf{Q}$ and $\mathbf{u} \in \mathrm{rec}(\mathsf{Q})$.

p. 97 Exercise 3.9: here we want to require the set to be closed, not just convex.

p. 101 Exercise 3.44: On the first two lines of this exercise, $L$ needs to be replaced by $L'$ in two occurrences.

p. 125 The rational function in the middle of the page (just before "This implies, again with (4.6.4)") should have $1 - z_1 z_2 z_3^2$ as its last factor in the denominator.

p. 141 In addition to the note on Theorem 4.2.2 and Cayley's work on composition, there is an illustrious connection to Vedic poetry; see "The So-Called Fibonacci Numbers in Ancient and Medieval India" by Parmanand Singh, *Historia Mathematicae* 12 (1985), 229–244.

p. 198 Exercise 5.18: the first inequality should read $a_0 x \geq b_0$.

p. 207 In Theorem 6.2.2, the phrase "crosscut in $\mathscr{N}$" needs to be replaced by "collection of elements in $\mathscr{N}$ such that every minimal element is uniquely covered".

p. 226 The literature contains different (and unfortunately conflicting) definitions of the comajor index.

p. 240 In the string $0 = x_u = x_{v_0} < \ldots < x_{v_k} = x_u$, the second $x_u$ should be $x_v$. In the following line, $u$ should be replaced by $v$.

p. 262 In the last line before Proposition 7.5.9, it should say $1 \leq k < d$.

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