Regular digraphs of diameter 2 and maximum order: Corrigenda

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In [1], in Figure 6, Eqs. (9) and (10), each v_l should be replaced by v_{l_q}, where q is the second argument (index) of the corresponding λ and x. Additionally, on p. 300, v_3 and v_4 should be replaced by $v_{3,1}$ and $v_{4,1}$ respectively. Some changes are also necessary in Formulas 11 and 12 (p. 299) used in Theorem 2.

Morever, since $\sum_{q=1}^{l} e^{i\frac{2\pi q}{l}} = 0$ for $l \geq 2$, we have $\sum_{q=1}^{\lfloor \frac{l-1}{2} \rfloor} c_{lq} = \begin{cases} \frac{1}{2} & \text{if } l \geq 3 \text{ odd} \\ 1 & \text{otherwise}. \end{cases}$

Consequently, the correct version of Theorem 2 is:

Theorem 2 *For the numbers m_l of permutation cycles of length l, $l = 1, 2, ..., n$ of a (d)-digraph there are nonnegative integers u and v_{lq}, $q = 1, 2, ..., \lfloor \frac{l-1}{2} \rfloor$, fulfilling (11) and (12).*

Where

$$d - u + \sum_{\substack{l \text{ odd} \\ l \geq 3}} \sum_{q=1}^{(l-1)/2} [-2(m_l - v_{lq}) + 2(2v_{lq} - m_l) re\{x(l,q)\}]$$
$$+ \sum_{l \text{ even}} \sum_{q=1}^{\frac{1}{2}l-1} [-2(m_l - v_{lq}) + 2(2v_{lq} - m_l) re\{x(l,q)\}] - \frac{1}{2} \sum_{l \text{ even}} m_l = 0, \tag{11}$$

$$d^2 + u + \sum_{\substack{l \text{ odd} \\ l \geq 3}} \left[m_l + \sum_{q=1}^{(l-1)/2} (-2v_{lq} + 2(m_l - 2v_{lq}) re\{x(l,q)\}) \right]$$
$$+ \sum_{l \text{ even}} \sum_{q=1}^{\frac{1}{2}l-1} [-2v_{lq} + 2(m_l - 2v_{lq}) re\{x(l,q)\}] + \frac{1}{2} \sum_{l \text{ even}} m_l = m_1. \tag{12}$$

[1] Edy Tri Baskoro, Mirka Miller, Ján Plesník and Štefan Znám, Regular digraphs of diameter 2 and maximum order, *Australasian Journal of Combinatorics* 9 (1994), 291–306.

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