Handbook of Product Graphs, Second Edition

Errors, Misprints and Notes

December 27, 2014

Errors, misprints, missing references

- Page 246, Proposition 20.8: The proposition holds for τ^*, but not for τ.
- Page 258, line 5: replace "Slutzky" with "Slutzki".
- Page 305, line 16: replace "$\gamma(G \,\square\, H) = \gamma(G)\gamma(H)$" with "$\gamma(G \,\square\, H) \geq \gamma(G)\gamma(H)$".
- Page 335, line above Lemma 26.38: replace "$G \to \mathcal{C}_n(G)$" with "$H \to \mathcal{C}_n(G)$".
- Page 336, line above Lemma 26.40: replace "restriction every" with "restriction to every".
- Page 336, line -5: replace "but $\chi(\mathcal{C}_3(G)) \geq 3$" with "but $\chi(\mathcal{C}_3(G)) > 3$".
- Page 357, last line: the following paper should be added to the list: J. Žerovnik, Perfect codes in direct products of cycles—a complete characterization, Adv. in Appl. Math., 41 (2008), 197–205.
- Page 385, line 17: replace twice "$C_m \times C_n$" with "$C_m \times P_n$".
- Page 416, line -12: should read: $S(\bigtimes_{\iota \in I} G_\iota) = \square_{\iota \in I} S(G_\iota)$,
- Page 437, line -12: replace "The relationship between the Laplacian of a product and that of the factors is the same as for the adjacency matrix." by "The relationship between the Laplacian spectrum of a product and that of the factors is very difficult except for the Cartesian product, unless the graphs are regular."

Notes

- Chapter 2, Independence number

  Simon Špacapan[1] extended the No-Homomorphism Lemma 2.13 and Theorem 27.13 on the independence number of direct powers of vertex transitive graphs to assertions about the k-independence number. Notice that

[1]Simon Špacapan, The k-independence number of direct products of graphs and Hedetniemi's conjecture, European Journal of Combinatorics, 32 (2011), 1377-1383

the k-independence number $\alpha_k(G)$ of a graph G is the size of the largest k-colorable induced subgraph of G.

Both the No-Homomorphisms Lemma and Theorem 27.13 hold if $\alpha(G)$ is replaced by $\alpha_k(G)$.

- Chapter 31.2, Free product

  It may seem surprising, but the free product $G*H$ of graphs is an isometric subgraph of the weak Cartesian product of infinitely many copies of G and H (Aleksandra Jędrzejaszek, Free Products of Graphs, Master Thesis, AGH Cracow, 2011).