Comment on Volume 7, article R47 (2000)

“A Turán Type Problem Concerning the Powers of the Degrees of a Graph”

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Comment by the authors, August 11, 2004:

In the original version of this paper Theorem 1.1 was mistakenly stated for all p. This was also observed by Pikhurko [2] and by Schelp. The theorem is valid only in the linear, quadratic and cubic cases. Namely:

Let $k > 2$ be a positive integer, and let $p = 1, 2, 3$. Then $t_p(n, K_k) = e_p(T(n, k))$, where $T(n, k)$ is the Turán Graph.

Theorem 1.1 is sharp in the sense that for $p \geq 4$, $t_p(n, K_k)$ is *not* obtained by the Turán graph. This can already be seen by the fact that the complete bipartite graph $G = K_{\lfloor n/2-1 \rfloor, \lceil n/2+1 \rceil}$ has $e_4(G) > e_4(T(n, 3))$.

A revised version of this paper addressing this comment can be found in [1].

References

[1] Y. Caro and R. Yuster, *A Turán Type Problem Concerning the Powers of the Degrees of a Graph (revised)*, arXiv:math.CO/0401398 (2004).

[2] O. Pikhurko, *Remarks on a paper of Y. Caro and R. Yuster on a Turán problem*, arXiv:math.CO/0101235 (2001).