

Comments by the author on Volume 12, article R67:

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As pointed out by John Talbot, the principal result stated in this note is known, and may be found in [3]. Lovász provides sharper lower and upper bounds on $g(k)$, viz., $\binom{2k-3}{k-1} < g(k) \leq (2r-1)\binom{2k-3}{k-1}$. He also makes reference to a prior (1964), weaker variant of this result due to Calczynska and Karłowicz. Lovász's result was subsequently sharpened by Tuza [5] as follows: $2\binom{2k-4}{k-2} < g(k) \leq \binom{2k-1}{k-1} + \binom{2k-4}{k-1}$. Related papers include [1] and [4]; the latter indicates that $g(3) = 7$ and $g(4) = 16$ are the largest known values of g . Lovász's upper bound is also presented in [2].

So, the chief surviving novelties of R67 are the generalization to lattices, and the enumeration of pedestals for $k \leq 3$.

References

- [1] N. Alon and Z. Füredi, On the kernel of intersecting families, *Graphs and Combinatorics* 3(1987), 91-94.
- [2] Bela Bollobás, *Combinatorics: Set Systems, Hypergraphs, Families of Vectors, and Combinatorial Probability*, Cambridge University Press 1986 pp.93-94.
- [3] L. Lovász, *Combinatorial Problems and Exercises, Second Edition*, North-Holland, Amsterdam, 1993, Exercise 13.27 (first published 1979).
- [4] J. Talbot, The number of k -intersections of an intersecting family of r -sets, *J. Combin. Theory Ser. A*, 106 2 (2004), 277-286.
- [5] Zs. Tuza, Critical hypergraphs and intersecting set-pair systems, *J. Combin. Theory Ser. B* 39 (1985) pp. 134-145.