

These are not the  $\beta$ -valuations of Rosa [4] (graceful numberings of Golomb [1]) nor the magic configurations of Murty [3]. They are closer to, but not identical with, the magic labellings of Stanley [5], [6], [7].

Page i defines a magic labelling as an assignment of integers to the edges of a tree, so that the sum of the labels on edges incident with a given node is at most ["is equal to" in Stanley]  $N$ . The number of such labellings is a polynomial in  $N$ . Associated with each polynomial is the generating function

$$g(x) = (1 - x)^{1 + \deg[f]} \sum_{J=0}^{\infty} f(J)x^J.$$

Pages ii and iii are unacknowledged copies of [2].

Pages 1–81 list all trees on at most 10 points, with the polynomial and generating function for each. The computations were done by MACSYMA at M.I.T.

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1. S. W. GOLOMB, "How to number a graph," in R. C. Read, *Graph Theory and Computing*, Academic Press, New York, 1972, pp. 23–37.
2. FRANK HARARY, *Graph Theory*, Addison-Wesley, Reading, Mass., 1969, pp. 233–234.
3. U. S. R. MURTY, "How many magic configurations are there?," *Amer. Math. Monthly*, v. 78, 1971, pp. 1000–1002.
4. A. ROSA, "On certain valuations of the vertices of a graph," *Théorie des Graphes*, Dunod, Paris, 1967, pp. 349–355.
5. RICHARD P. STANLEY, "Ordered structures and partitions," *Mem. Amer. Math. Soc.*, no. 119, 1972.
6. RICHARD P. STANLEY, "Linear homogeneous diophantine equations and magic labellings of graphs," *Duke Math. J.*, v. 40, 1973, pp. 607–632.
7. RICHARD P. STANLEY, "Magic labellings of graphs, symmetric magic squares, systems of parameters and Cohen-Macaulay rings," *Duke Math. J.*, v. 43 1976, pp. 511–531.

29 [9].—ROBERT BAILLIE, *Solutions of  $\varphi(n) = \varphi(n + 1)$  for Euler's Function*, University of Illinois, Urbana, Illinois, 1978, eleven computer output sheets deposited in the UMT file.

This is an extension of Baillie's earlier table [1] of the 306 solutions of

$$(1) \quad \varphi(n) = \varphi(n + 1)$$

that have  $n \leq 10^8$ . Here he gives all 85 additional solutions that satisfy  $10^8 < n \leq 2 \cdot 10^8$ . See [1] for more detail. There is now sufficient data here to encourage practitioners of heuristic to attempt a conjecture for the asymptotic number of solutions of (1), having  $n \leq N$ , as  $N \rightarrow \infty$ .

No additional example of  $\varphi(n) = \varphi(n + 1) = \varphi(n + 2)$  was found. Only one of these 85 solutions has the property that multiplication (mod  $n$ ) is isomorphic to multiplication (mod  $n + 1$ ) for the  $\varphi(n) = \varphi(n + 1)$  residue classes prime to the modulus. This occurs for  $n = 184611375$  where both Abelian groups equal  $C(2) \times C(2) \times C(60) \times C(378300)$ . Such isomorphic multiplication is becoming increasingly rare; frequently, even the 2-ranks of the two groups are unequal. There are only 24 examples for  $n \leq 2 \cdot 10^8$ , (see [1]).

D. S.

1. ROBERT BAILLIE, UMT 6, *Math. Comp.*, v. 30, 1976, pp. 189–190.