

Errata The math problems notebook *

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1. Problem 1.4 page 3, line 3 the equality should read

$$a^{\varphi(m)+1} \equiv a \pmod{m}$$

(thanks to *Achilleas Sinefakopoulos*).

2. Problem 3.29 Solutions Comments 58. Here n states for $2k + 1$

(thanks to *Bernd Mulansky* for pointing it out).

Moreover, *Bernd Mulansky* and *Wolfgang Burmeister* gave a more general claim, as follows.

There exists $B \subset \{1, \dots, n\}$ such that

$$\left| \sum_{i \in B} z_i \right| \geq 1/c_n \sum_{i=1}^n |z_i|,$$

where $c_n = 2n \sin(\pi/2n)$, and c_n is sharp if n is not a power of 2.

A thoroughful discussion about the best isodiametric inequality for n -gons in plane can be found in the recent article:

M.Mossinghoff, *A \$1 problem*, Amer.Math.Monthly 113(2006), 385-402.

(see <http://www.davidson.edu/math/mossinghoff/OneDollarProblemMossinghoff.pdf>)

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