

THE

# Mathematics Student

*A Quarterly Dedicated to the Service of Students and Teachers  
of Mathematics in India.*

Vol. XIII—1945

Edited by

A. NARASINGA RAO, M.A., L.T., D.Sc., F.A.Sc.,  
*Andhra University, Waltair, South India.*

Printed at  
St. Joseph's Industrial School Press, Trichinopoly  
Q. H. No. Ty—I, 1947

AND

Published by S. MAHADEVAN, M.A.,  
Hon. Secretary, Indian Mathematical Society, Teachers' College, Madras 15

## CONTENTS

	PAGES
<b>Aleyamma George</b> : On Sterling's approximation for $\Gamma(x)$	35— 36
<b>Bandyopadhyaya, G.</b> : Notes on the ellipse II	... 100—107
<b>Bangalore</b> : On the perimeter of an ellipse	... 69
<b>Chandrasekharan, K.</b> : Further note on intuitionistic set theory	... 49— 51
<b>Chandratreya, G. L.</b> : Application of contour integrals to a problem in electrostatics	... 65— 66
<b>Chowla, S.</b> : On quintic equations soluble by radicals	... 84
<b>Daljit Singh</b> : On the series $\sum s^r$	... 59— 60
<b>Gupta, Hansraj</b> : Congruence properties or $\sigma(n)$	... 25— 29
——— : Solution of the general quartic	... 31
<b>Hukum Chand</b> : Proofs of some well known theorems in continued fractions	... 98—101
<b>Janardana Aiyer, S.</b> : On the arithmetic and the geometric means from a type III population	... 10— 15
<b>Juzuk, D.</b> and <b>Motzkin, Th.</b> : A multiplicatory formula for the general recurrence equation of order 2	... 61— 63
<b>Kesava Menon, P.</b> : Some asymptotic values	... 36— 38
——— : On the equation $x_1^3 + x_2^3 = y_1^3 + y_2^3$	... 52— 54
<b>Krishnamurti, R.</b> : Precession or Ayanamsa	... 77— 81
<b>Krishnan, V. S.</b> : Homomorphisms and congruences in general Algebra	... 1— 9
<b>Krishna Reddy</b> : Some limit theorems	... 71— 72
<b>Krishnaswami Ayyangar, A. A.</b> : A note on the sign of the perpendicular	... 102—105
——— and <b>Gupta, Hansraj</b> : Criteria for an ellipse	... 108
<b>Levi, F. W.</b> : Relations and Operators (Presidential Address)	... 139—148
<b>Mathur, G. L.</b> : Reversible prime pairs	... 48
<b>Mehar Singh</b> : On the limit of a series of variable terms	67— 68
<b>Mukunda Marar</b> and <b>Rajagopal, C. T.</b> : Gregory's series in the mathematical literature of Kerala	... 92— 98
<b>Nair, U. S.</b> and <b>Mahajani, G. S.</b> : Generalization of a certain definite integral	... 55— 56
<b>Narayananamurti, T.</b> : Fuerbach's Theorem (with A.A.K.'s remarks)	... 43— 46
<b>Neville, E. H.</b> : Indefinite integration by means of residues	16— 25
——— : Gaskin's theorem and the orthoptic constant	... 64— 65
<b>Puri, Amritsagar</b> : An identity and some deductions	... 41— 42
<b>Raghavachari, T. K.</b> : On a simplified form of the Euler-Maclaurin sum formula	... 32— 33
<b>Rajagopal, C. T.</b> : Remarks on Cauchy's convergence principle	... 33— 35

Ramanathan, K. G.: Congruence properties of $\sigma_a(n)$ ...	30
Sankara Pillai, K.: An asymptotic expansion ...	82—84
Satyanarayana, K.: The reduction of the general equation of the second degree ...	109—110
Sawyer, W. W.: Problems in the teaching of mathematics	85—91
Sivaraj, K.: M. Kay's extension of Feurbach's theorem ...	69—70
Srinivasan, A. K.: Residual types of partitions of 0 into 4 cubes ...	47—48
Suryanarayana Rao, B.: On numbers which are the sum or difference of two cubes (with the Editor's remarks) ...	57—58
Report of the Fourteenth Conference of the Indian Mathematical Society ...	125—126
NEXT PRIZE PROBLEM. For the Narasinga Rao Medal ...	179—180
ANNOUNCEMENTS AND NEWS: 39—40, 75—76, 123—124, 177—178	
FACILITIES FOR STATISTICAL STUDY OFFERED AT VARIOUS CENTRES IN INDIA: ...	117—123
SOME INSTRUCTIVE PROBLEMS AND THEIR SOLUTIONS: (by V. G. Iyer and M. Venkataraman) ...	111—117
GLEANINGS: 9, 29, 38, 40, 51, 72, 76, 124	
BOOKS RECEIVED FOR REVIEW: ...	76
REVIEWS: B. Seetharama Sastry, <i>Analysis of functions of real variables</i> ...	73
T. S. Sankaranarayana Pillai, <i>Students' guide to statistics</i> ...	73—74
K. D. Panday: <i>Solid geometry</i> ...	74

THE M.

Volume XIII

HOMO

V. S.

1. General

Algebra

systems, like  
and functions

Nineteenth Ce-

axiomatic app-  
of the form  
number based  
theory now in

These si-

fundamenta-

defined to w-

operation +,

fying 0+,

element x, +

operation, +,

Group (and

A ring is de-

sociative op-

x, y, z from

is also com-

double gro-

other than i-

identity ele-

as a ring, I

is a skew fi-

## ERRATA

Page	Line	For	Read
28	11 from the bottom	we must have $h$ odd	we must have $h$ odd for $\lambda > 1$
29	18, 19, 20	Replace by the following :— $j = 4, 8, \bar{p}^\lambda, 2\bar{p}^\lambda, T, 2T, 4J$ or $8J$ ; where $p$ is an odd prime, $\lambda \geq 1$ , $J$ and $T$ are odd and $\geq 3$ ; and	
		(i) for each prime $p$ which divides $J$ , $\text{pot}_2 \phi(p) = 1$ ;	
		(ii) for each prime $p$ , which divides $T$ , $\text{pot}_2 \phi(p)$ is the same ;	
		$\text{pot}_2(i)$ denotes as usual the index of the highest power of 2 which divides $i$ . (Suggested by a note of Ramanathan)	
167	12	Herman Weyl	Hermann Weyl
"	21	Kolomogorov	Kolmogoroff