

ETH (1949) Department.

MS SERIES.

G.O. NO. 2292 Edn

Dated 15. 7. 1949

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14.9.10 of Compt

[Despatch Abstract.]

Edn. Secondary. Reorganisation - Introduction of "Algebra & Geometry" as an additional subject of study from 1949-50 - Ordered.

Back Papers.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

Further Papers.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

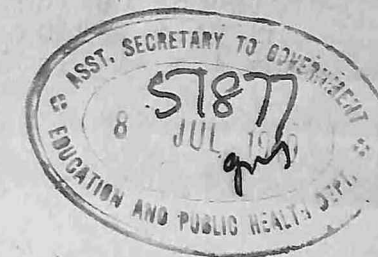
EDUCATION

From

The Director of Public Instruction,
Madras.

To

The Secretary to Government,
Education and Public Health Department,
Madras.



RC No. 2737 E1/47 dated 6--7--1949.

Sir,

Sub:-- Education - Secondary - Reorganisation - Preparation
of syllabus in Higher Mathematics - Constitution
of a Committee.

Ref:-- G.O. Ms.No. 874 Education dated 25-3-1949.

The Committee constituted by Government for the preparation
of the syllabus in Higher Mathematics under the Reorganised scheme
of Secondary Education met on 2-4-49 at 2-30 P.M. in the Office
of the Director of Public Instruction, Madras. A copy of the
minutes of the meeting is submitted herewith. *pages 3 to 4 infra*

2. The draft syllabus in Higher mathematics prepared by
the above Special Sub Committee appointed by Government was placed
before the Board of Secondary Education at its meeting held on
23-5-1949. A copy of the minute III of the meeting of the Board
of Secondary Education is submitted herewith. *vide below*

3. In pursuance of the recommendations of the Board of
Secondary Education and in anticipation of the approval of Government
I have instructed the SCHOOLS to introduce the teaching of
'Algebra and Geometry' in Form V during 1949-50. I submit a copy
of my Proceedings RC No. 2737 E1/47 dated 28-6-1949. *pp 7-8 infra*

4. I request that Government may be pleased to order the
introduction of the teaching of 'Algebra and Geometry' as an
additional subject of study in Forms V and VI under the Reorganised
scheme of Secondary Education, it being made to commence in Form
V during 1949-50.

My action in having instructed the schools to introduce
the teaching of the subject in Form V during 1949-50 in anticipation
of Government sanction may also be approved.

Vide X on P
Simpr Yours faithfully,
Phinduram

for DIRECTOR OF PUBLIC INSTRUCTION.

ARB : 6-7

Copy of minute III of the meeting of the Board of Secondary Education.

III. The draft syllabus in Higher Mathematics prepared
by the Special Sub-Committee appointed by Government was taken up
for consideration. After some discussion, it was agreed to adopt
temporarily the syllabus in Higher Mathematics prepared by the
Special Sub-Committee and to provide for an additional paper in
Higher Mathematics in addition to the general mathematics for
the benefit of pupils who had an aptitude for the higher mathematics
and also would take Group I of the Intermediate course. It was
also decided that failure in the Higher Mathematics paper at the
S.S.L.C. Public Examination should not affect the candidates
eligibility, if he had scored the prescribed marks in the other
subjects. The Universities have to be addressed to permit this
concession, as a special case. The heads of high schools should
be instructed to introduce the teaching of Higher Mathematics

Mathematics in Form V during 1949-50, the subject being taught for four periods per week, allowing them discretion to adjust the time-table in the best manner possible.

(True copy)

for DIRECTOR OF PUBLIC INSTRUCTION.

ARB : 6-7

MINUTES OF THE MEETING OF THE COMMITTEE APPOINTED IN G.O.MS.NO.874 Education, dated 25th MARCH 1949 TO DRAFT A SYLLABUS IN HIGHER MATHEMATICS, HELD ON 2-4-49 AT 2-30 P.M., IN THE OFFICE OF THE DIRECTOR OF PUBLIC INSTRUCTION, MADRAS.

MEMBERS PRESENT.

1. Dr. W. F. Kibble, Professor, Madras Christian College, Tambaram.
2. Dr. K. Rangaswami Ayyar, Lecturer in Mathematics, Annamalai University, Annamalainagar.
3. Sri M. Lakshmanamurthi, Lecturer, Department of Maths. University College of Arts and Commerce, Waltair.
4. Sri S. Natarajan, Headmaster, St. Gabriel's High School, Broadway, Madras.
5. Mr. K. O. Kuruvilla Jacob, St. Paul's High School, Vepery, Madras.
6. Miss K. Nathaniel, Lady Willingdon Training College, Madras.
7. Sri V. K. Krishna Menon, Deputy Director of Public Instruction, Madras (Finance)
Sri T.P. Santhanakrishna Naidu, Deputy Director of Public Instruction (Elementary Education) and
Sri P. Sundarajan, Special Officer (Text Books) were also present by invitation.

The minutes of a meeting of the representatives of the three Universities in the province, and Officers of the Education Department, held at the Secretariat, Fort St. George on 14th Feb. 1949 and presided over by the Hon'ble Minister for Education, which recommended the appointment of the present Committee were discussed and the terms of reference given therein were clarified as the following:-

(1) To draw up a syllabus for Higher Mathematics for Forms IV to VI for pupils, if they desired, would be permitted to study this subject in addition to the course in Mathematics for these forms already included in the curriculum of the reorganised high school course:

(2) To base the contents of the syllabus (a) on the requirements of pupils who may later desire to

take up Mathematics or Science Groups in the Intermediate courses; and (b) on a time allotment of 3 periods a week in each of forms IV, V, and VI: and

(3) To review the present syllabus (for the reorganised course) in Mathematics, if necessary.

2. The Committee first reached a decision on (3) of the terms of reference as above that the finalised syllabus in Mathematics under the reorganised secondary school courses may be adopted without any change for all pupils, whether they took the higher mathematics course or not.

3. The Committee then proceeded to frame ^{the} syllabus in Higher Mathematics as follows:-

The following additions, deletions and substitutions were recommended with reference to the syllabus in Algebra and Geometry given on page 59 (Latest reprint) of the S.S.L.C. Scheme of 1929.

(1) In the last item under Algebra - for 'Graphs of simple algebraic functions and other applications and the solution of equations and problems' substitute 'Graphs of $y = mx + c$ and $y = ax^2$ and the application of graphical methods to the solution of linear and quadratic equations.'

(2) In item No.9 under Algebra - for 'Solution of problems by means of such equations' substitute 'Solution of quadratic equations by the method of factorisation'.

(3) Under item 9 of Schedule A - TO 'Construction of tangents to a circle' ADD 'Construction of direct and transverse common tangents'

(4) Under item 11 of Schedule A - TO 'Construction of regular figures of 3, 4, 6 or 8 sides, (1) in or about a given circle and (2) on a given straight line.'

ADD 'Construction of regular figures of 5, 10 and 12

ADD 'Construction of regular figures of 5, 10 and 12 sides using the protractor'.

(5) In Schedule B, under Areas -

Delete the whole of 'Illustrations and explanations of the Geometrical theorems corresponding for the following identities:-

$$k(a \div b \div c \dots\dots\dots) = ka \div kb \div kc \dots\dots$$

$$(a \div b)^2 = a^2 \div 2ab \div b^2$$

$$a^2 - b^2 = (a \div b)(a - b)$$

$$(a \div b)^2 \div (a-b)^2 = 2(a^2 \div b^2)$$

$$(a \div b)^2 - (a-b)^2 = 4ab.$$

(6) In Schedule B the last item, which is given below, may be deleted. 'The internal bisector of an angle of a triangle divides the opposite side internally in the ratio of the sides containing the angle, and likewise the external bisector externally'.

(7) Add the following as the last item Sine, cosine and tangent of acute angles -- Use of simple tables of these ratios.

4. As the proposed syllabus in Higher Mathematics is not very much different from the existing one followed under Algebra and Geometry of Group C under the S.S.L.C. Scheme 1929, and as that syllabus is being covered at present with a time allotment of 4 periods a week in two years (V Form and VI Form) the Committee recommended that the course in Higher Mathematics may begin at the V Form stage, the necessary periods being provided therefor.

5. The Committee recommended that the subject may be named Algebra and Geometry instead of 'Higher Mathematics'.

6. The following books of reference were recommended:

(1) Mathematics in Theory and Practice,
edited by W.W.Sawyer, B.A., (The New Educational Library,
Odham's Publication).

(2) Mathematical Recreations by Maurice
Kraitichik.

10/1/41

R.C. No. 2737 E1/47 dated 28-6-49.

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Subject.

Education - Secondary - Reorganisation - Additional subject -
"Algebra and Geometry" - Introduction in Forms V and VI - Ordered.

The undermentioned officers are informed that "ALGEBRA AND GEOMETRY" is introduced under the Reorganised Scheme of Secondary Education as an additional subject of study. The subject is intended for the benefit of pupils who have a special aptitude for mathematics and who wish to take up Mathematics and Science for their University Courses from the Intermediate up. It is left entirely to the option of a student whether he takes up this subject in addition or not. Separate papers in the subject "Algebra and Geometry" will be set at the Public Examination in addition to the usual paper on Mathematics.

2. OFFICERS are requested to instruct the heads of schools to introduce the teaching of "Algebra and Geometry" in Form V during 1949-50. The subject may be taught for four periods a week. Headmasters of Schools have discretion to adjust the time-table in the best manner possible.

3. THE syllabus for the subject will be the same as that prescribed for "Algebra and Geometry" under Group C of the E.S.L.C. Scheme of 1929 printed on pages 59 to 61 with the following modifications:--

(1) In item No. 9 under the heading Algebra for "Solution of problems by means of such equations" substitute "Solution of quadratic equations by the method of factorisation."

(2) In the last item under the heading Algebra for "Graphs of simple algebraic functions and their applications to the solution of equations and problems" substitute "Graphs of $y = mx$ plus c and $y = ax^2$ and the application of graphical methods to the solution of linear and quadratic equations".

(3) Under item 9 of Schedule A to "Construction of tangents to a circle" add "Construction of direct and transverse tangents."

(4) Under item 11 of Schedule A to "Construction of regular figures of 3, 4, 6 or 8 sides, (1) in or about a given circle and (2) on a given straight line" add "Construction of regular figures of 5, 10 and 12 sides using the protractor."

(5) In Schedule B, under the heading Areas --

Delete the whole of "Illustrations and explanations of the Geometrical theorems corresponding to the following identities:--

$$K(a + b + c + \dots) = Ka + Kb + Kc + \dots$$

$$(a + b)^2 = a^2 + 2ab + b^2$$

$$a^2 - b^2 = (a + b)(a - b)$$

$$(a + b)^2 + (a - b)^2 = 2(a^2 + b^2)$$

$$(a + b)^2 - (a - b)^2 = 4ab$$

In schedule B, Under the heading "Proportion : Similar Triangles", the last item, which is given below, may be deleted.

The internal bisector of an angle of a triangle divides the opposite side internally in the ratio of the sides containing the angle and likewise the external bisector externally.

(7) Add the following as the last item.

Sine, cosine and tangent of acute angles --

Use of simple tables of these ratios.

4. THE following books of reference are recommended.

1. Mathematics in Theory and Practice edited by W.W. Sawyer, B.A.
(The New Educational Library, Odhams Publication)
2. Mathematical Recreations by Maurice Kraitchik.

Whitham
for DIRECTOR OF PUBLIC INSTRUCTION.

To

All the District Educational Officers. With spare copies for
All the Inspectresses of Girls schools immediate communication
to heads of all High schools.

The Principals of Colleges with Secondary schools attached.

- Copy to the Divisional Inspectors of schools.
- Copy to the Secretary, Board of Secondary Education, Madras.
- Copy to all other officers corresponding direct with the Director.
- Copy forwarded to the Registrars of Madras, Andhra and Annamalai Universities.
- Copy to the Special Officers of District Boards and Commissioners of Municipalities.
- Copy to all sections in the D.P.I.'s office.
- Copy to E Section 12 copies.
- Copy to Record 40 copies.

ARB : 28-6-49.

EDN & P.H. DEPT. (B1)

Education - Secondary - Reorganisation - Introduction of 'Algebra & Geometry' as an additional subject of study from 1949-50 - Ordered.

Read: G.O.No.874 Edn. dated 25-3-49.
From the D.P.I., Rc.No.2737 E1/47 dated 6-7-49.

ORDER (MS) NO. 2292 EDN. DATED 15-7-49

The Govt. approve that the introduction of the teaching of 'Algebra & Geometry' as an additional subject of study under the scheme for reorganisation of Secondary Education in this Province in Forms V and VI of the secondary schools for the benefit of the students who have special aptitude for Mathematics and who wish to take to the study of subjects in Group I of the Intermediate course. The teaching of the subject will commence in Form V ~~also~~ during the current school year, and will be taught for four periods in a week.

2. The Govt. approve the action of the D.P.I.

and forthwith in having instructed the managements of schools to introduce

P.T.O.

6/19/49

14/7/49

10-7-49

pages 7 & 8 of and form 4 only

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introduce the teaching of the subject in Form V during
the current school ^{year} in anticipation of their sanction.

11/7/49
11.7.49

11/7/49

To The D.P.I.

The Regr. of
University of Madras
The Regr. Annamalai
University.
The Regr. Andhra Uty
Waltair.

Am
M. S. L.
Annamalai
university

note :- The draft order on pages 1-2 above may be
circulated to HM (E+L) for approval before issue.

11/7/49
11/7/49

12/7/49

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11/7/49

H.M (E+L)

AM
14/7/49

