APPENDIX C

TWO-YEAR COLLEGE QUESTIONNAIRE
(SEE PAGE C-6 FOR REMEDIAL QUESTIONNAIRE)

SURVEY OF PROGRAMS IN MATHEMATICS

IN

TWO-YEAR COLLEGES

1985

General Instructions

This questionnaire should be completed by the person who is directly in charge of the mathematics program at your institution.

You are asked to report on all the courses and faculty in your institution which fall under the general heading of the mathematical or computer sciences except for remedial programs taught in a special unit outside the mathematics department. For some colleges this may involve courses and faculty in statistics, applied mathematics and computer science that, although mathematical in nature, are taught outside the mathematics department. If your institution does not have a departmental or divisional structure, consider the group of all mathematics and computer science professors to be the "mathematics department" for the purpose of this questionnaire. Question III below refers to courses taught in the "mathematics department" as explained above. Question IV refers to mathematics and/or computer science courses taught outside the "mathematics department" but not courses taught in a special unit for remediation. Courses in a special unit for remediation taught outside the mathematics department should be reported by the head of that unit in the special questionnaire on remediation (blue page.) Please include data on part-time and evening students and faculty as well as data on occupational and terminal programs. Include non-credit and remedial courses. Do not, however, include data concerning campuses jurisdictionally separate from yours, if such exist.

If the mathematics department offers the remedial program, then the person in charge of the mathematics department should fill in and return the special remediation questionnaire. If another unit offers the remedial program, then the person in charge of that unit should fill out and return the special remediation questionnaire which will be sent to him/her following receipt of the return postcard.

Please return completed questionnaire by 27 November 1985 to:

Conference Board of the Mathematical Sciences
1529 Eighteenth Street, N.W.
Washington, D.C. 20036
(202) 387-5200

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For Coding Only

1

I. A. NAME OF INSTITUTION _____

If this two-year institution is part of a larger organization, identify this relationship: _____ 20

B. Total institutional enrollment Fall 1985 (approximate):

	College Transfer Program		Occupational/Technical	
	Full-time Students	Part-time Students	Full-time Students	Part-time Students
Freshman				
Sophomores				
Unclassified or other				
Total				

21-40
41-60
61-80

2

7-26

II. How is the mathematics program administered at your institution?

___ Math. Department ___ No dept. structure

___ Math. & Comp. Sci. Dept. ___ Other (specify):

___ Math. & Sci. Dept. or Div. _____ 27

III. COURSES IN THE MATHEMATICAL AND COMPUTER SCIENCES OFFERED BY YOUR MATHEMATICS DEPARTMENT in the Fall 1985.

Instructions for preparing table on this and the following page.

A. The courses in column (1) in the following table are listed with typical course titles (which may not necessarily coincide with the titles you use). Additional blank spaces are provided to permit you to write in names of courses which do not fit reasonably under some listed title. Please use your best judgment as to how courses should be listed.

For the purpose of this survey, consider as a single course, instruction in a particular area of mathematics which you offer as a sequence of two or more parts (e.g., calculus.)

B. For each course in column (1) that is offered during Fall 1985, write in column (2) the total number of students who enrolled (in any part of) the course in the Fall term of 1985. Thus, for a 2 semester sequence of calculus, Math 1 and Math 2, the enrollment in column (2) would be the sum of the Fall enrollment in Math 1 and in Math 2. If a course is not being taught in the Fall of 1985, but was offered in the academic year 1984-85 or is expected to be offered during some other term of the 1985-86 academic year, write S for "Sometimes." If a course is not offered during this period, write N for "Not Offered."

C. In column (3) give the total number of sections of the course in Fall 1985.

D. In column (4) give the total number of sections of this course taught by part-time faculty.

E. In column (5) give the total number of sections of this course for which a hand calculator is recommended.

F. In column (6) give the total number of sections of this course in which computer homework assignments are given.

NOTE: EACH BOX IN ANY ROW SHOULD CONTAIN AN ENTRY IF COURSE IS OFFERED IN FALL 1985. EACH BOX IN COLUMN (2) SHOULD CONTAIN A NUMBER, AN N, OR AN S.

Name of Course (or equivalent)	Total No. of Students Enrolled Fall 1985	Total No. of Sections	No. Sect. Taught by Part-time Faculty	No. Sect. Hand Calc. Recommended	No. Sect. Computer Assignments are Given	
(1)	(2)	(3)	(4)	(5)	(6)	
1. Arithmetic						28-39
2. General Mathematics (basic skills, operations)						40-51
3. Elementary Algebra (High School)						52-63
4. Intermediate Algebra (High School)						64-75 / 3
5. High School Geometry						7-18
6. College Algebra						19-30
7. Trigonometry						31-42

Name of Course (or equivalent)	Total. No. of Students Enrolled Fall 1985	Total No. of Sections	No Sect. Taught by Part-time Faculty	No. Sect. Hand Calc. Recommended	No. Sect. Computer Assignments are Given	
(1)	(2)	(3)	(4)	(5)	(6)	
8. College Algebra and Trigonometry, Combined						43-54
9. Elem. Functions						55-66
10. Analytic Geometry						67-78 / 4
11. Analytic Geometry and Calculus						7-18
12. Calculus (math., phys. sci., & eng.)						19-30
13. Calculus (bio., soc., & mgt. sciences)						31-42
14. Differential Equations						43-54
15. Linear Algebra						55-66
16. Discrete Math.						67-78 / 5
17. Finite Math.						7-18
18. Math. for Liberal Arts						19-30
19. Math. of Finance						31-42
20. Business Mathematics						43-54
21. Math. for Elem. School Teachers						55-66
22. Elementary Statistics						67-78 / 6
23. Probability (and Stat.)						7-18
24. Technical Mathematics						19-30
25. Technical Math. (calculus level)						31-42
26. Use of Hand Calculators						43-54
27. Data Processing, Elem. or Adv'd						55-66
28. Elem Program'g (BASIC, FORTRAN, PASCAL, COBOL)						67-78 / 7
29. Advanced Programming						7-18
30. Assembly Language Programming						19-30
31. Data Structures						31-42
32. Other Comp. Sci. Courses						43-54
33. Other Math. Courses						55-66

IV. OUTSIDE ENROLLMENTS - FALL 1985

This question identifies courses in mathematics or computer science taught in divisions or departments of your institution other than that division or department having primary responsibility for mathematics and other than a unit concerned primarily with remedial mathematics. Enter in the relevant boxes an estimate of the total course enrollments for Fall 1985. Please consult schedules to give good estimates of numbers of enrollments. Please enter 0 (zero) in each box for which there are no courses given.

Course	Enrollment in courses given by division specializing in: Natural Sciences	Occupational Programs	Business	Social Sciences	Other
1. Arithmetic					
2. Business Mathematics					
3. Statistics/ Probability					
4. Pre-calculus College Math.					
5. Calculus or Diff. Equations					
6. Computer Sci. & Program'g					
7. Data Processing					
8. Technical Mathematics					
9. Other					

8 | 7-26 | 27-46 | 47-66 | 9 | 7-26 | 27-46 | 47-66 | 10 | 7-26 | 27-46 | 47-66

V. QUESTIONS ON MATHEMATICS FACULTY

A. Full-time faculty: indicate in the table below the numbers of your full-time mathematical and computer sciences faculty members teaching courses reported in III above, according to their highest degrees and subject fields in which these were earned:

Highest Degree \ Subject Field	In Math.	In Stat.	In Computer Science	In Math. Ed.	In another field
Ph.D.					
Ed.D.					
Dr. Arts					
Master's degree, plus 1 year					
Master's degree					
Master's degree (spec. program) e.g., MAT, MST					
Bachelor's degree					

67-76 | 11 | 7-16 | 17-26 | 27-36 | 37-46 | 47-56 | 57-66

B. Part-time faculty: In the table below, indicate the numbers of your part-time faculty by highest degrees and subject fields:

Highest Degree \ Subject Field	In Math.	In Stat.	In Computer Science	In Math. Ed.	In another field
Ph.D.					
Ed.D.					
Dr. Arts					
Master's degree, plus 1 year					
Master's degree					
Master's degree (spec. program) e.g., MAT, MST					
Bachelor's degree					

67-76 | 12 | 7-16 | 17-26 | 27-36 | 37-46 | 47-56 | 57-66

C. What is the expected (or typical) teaching load in classroom contact hours for members of your full-time faculty? ____ 67-68

D. How many of your full-time faculty teach overloads? ____ 69-70

E. What is the average overload (in contact hours) for those faculty? ____ 71-72

F. Are faculty normally paid extra for overloads? ____ yes ____ no _ 73

G. What is the average teaching load in contact hours of part-time faculty? ____ 74-75

H. Of your part-time faculty, how many are: | 13

Employed Full-time in: High School (a)	Another Two-year College (b)	In Your Own College (c)	Four-year College (d)	Industry or Other (e)	Graduate Students (f)	Not Grad. Students & Not Employed Full-time Anywhere (g)	Total No. of Part-time Faculty (t)

7-22

NOTE: You should have t = a + b + c + d + e + f + g

VI. USE OF COMPUTERS

A. Does your department have convenient access to a computer or to computer terminal facilities: ____ yes ____ no _ 23

B. How many of your full-time faculty know a computer language? ____ 24-25

C. How many of your full-time faculty give class assignments involving the use of the computer each year (in courses other than computer sciences)? ____ 26-27

D. How many computer terminals and/or microcomputers are available for student use in your courses? ____ 28-30

VII. INSTRUCTIONAL FORMATS

A. At your institution, please indicate the extent to which the following formats are employed. Place a check in the appropriate column.

	Is not Being Used	Is Used by Some Faculty	Is Used By Most Faculty	
1. Standard lecture - recitation system (Class size ≤ 40)				_ 31
2. Large lecture classes (>40) with recitation sections				_ 32
3. Large lecture classes (>40) with no recitation				_ 33
4. Organized program of independent study				_ 34
5. Courses by television (closed circuit or broadcast)				_ 35
6. Courses by film				_ 36
7. Courses by programmed instruction				_ 37
8. (CAI) Courses by computer-assisted instruction				_ 38
9. Modules				_ 39
10. Audio-tutorial				_ 40
11. PSI (Personalized Systems of Instruction)				_ 41
12. Other				_ 42

B. MATH LABS

1. Does your institution operate a math lab or math help (tutorial) center? _____ yes _____ no _ 43

   (If you answered no in 1, go on to VIII.)

2. Year math lab was established. Before 1975 ___, 1975-79 ___, 1980- ___ _ 44

3. Personnel of the math lab include (check all relevant categories):

   ___ Full-time members of the Math. staff ___ Members of another dept. _ 45 _ 46

   ___ Part-time members of the Math. staff ___ Paraprofessionals _ 47 _ 48

   ___ Students ___ Other _____ _ 49 _ 50

VIII. COORDINATION OF PROGRAMS

A. Coordination with secondary schools

How often does your math staff consult with secondary schools on development and/or coordination of offerings?

Less Than Once A Year	Yearly	More Than Once Per Year	
			_ 51

B. Coordination with four-year institutions

1. Are your course offerings and/or curriculum subject to state-wide system control or approval? ___yes ___no _ 52

2. Is there official state-wide coordination of your mathematical offerings with those of four-year state institutions? ___yes ___no _ 53

3. How often does your institution consult with the mathematics department of four-year colleges on course offerings designed for transfer credit?

Less Than Once A Year	Yearly	More Than Once Per Year	
			_ 54

4. Are there other coordination activities involving your mathematics staff and mathematics departments of four-year colleges or universities in your area? ___ yes ___ no _ 55

If yes, please describe these briefly:

IX. FACULTY EMPLOYMENT AND MOBILITY

A. How many of your full-time faculty members were newly appointed on a full-time basis this year? _____ 56-57

Of this number, during the previous year 1984-85, how many were:

With Doctorate (math.)	With Doctorate (math.ed.)	With Other Doctorate	With No Doctorate		
				1. enrolled in grad. school	58-61
				2. teaching in a 4-year coll. or univ.	62-65
				3. teaching in another 2-year instit.	66-69
				4. teaching in a secondary school	70-73
				5. employed by you part-time	74-77
				6. employed in non-academic position	14 7-10
				7. otherwise occupied or unknown	11-14

B. Of the full-time faculty in 1984-85 who are no longer part of your full-time faculty, how many:

With Doctorate (math.)	With Doctorate (math.ed.)	With Other Doctorate	With No Doctorate		
				1. died, or retired	15-18
				2. are teaching in a 4-year coll. or univ.	19-22
				3. are teaching in a 2-year institution	23-26
				4. left for a non-academic position	27-30
				5. returned to graduate school	31-34
				6. left for secondary school teaching	35-38
				7. are otherwise occupied or unknown	39-42

X. AGE, SEX, AND ETHNIC GROUP OF FULL-TIME FACULTY

Record the number of full-time faculty members in each category:

AGE	<30	30-34	35-39	40-44	45-49	50-54	55-59	≥60	
Bachelor's									43-58
Master's									59-74
Doctor's									15 7-22
Men									23-38
Women									39-54
Amer. Indian/Alaskan native									55-70
Asian/Pacific Islander									16 7-22
Black (not of Hispanic orig.)									23-38
Hispanic									39-54
White (not of Hispanic orig.)									55-70

XI. PROFESSIONAL ACTIVITIES

Estimate the number of full-time members of your department who, in a given year,

1. ____ attend at least one professional meeting 71-72
2. ____ take additional mathematics or computer science courses 73-74
3. ____ attend minicourses or short courses 75-76
4. ____ give talks at professional meetings 77-78
5. ____ regularly read articles in professional journals 79-80
6. ____ write expository and/or popular articles 17 7-8
7. ____ publish research articles 9-10
8. ____ write textbooks 11-12

XII. PROBLEMS OF THE MID-'80's

Below are some concerns cited by many departments. Please rate each of the concerns on the 0 to 5 scale given by encircling a number, with 5 indicating a major and continuing problem and 0 indicating no present problem.

no problem	Scale				major problem		
0	1	2	3	4	5	A. Losing full-time faculty to industry/gov't	13
0	1	2	3	4	5	B. Maintaining vitality of faculty	14
0	1	2	3	4	5	C. Advancing age of tenured faculty	15
0	1	2	3	4	5	D. Lack of experienced senior faculty	16
0	1	2	3	4	5	E. Staffing computer science courses	17
0	1	2	3	4	5	F. The need to use temporary faculty for instruction	18
0	1	2	3	4	5	G. Salary levels/patterns	19
0	1	2	3	4	5	H. Class size	20
0	1	2	3	4	5	I. Remediation	21
0	1	2	3	4	5	J. Library: holdings, access, etc.	22
0	1	2	3	4	5	K. Departmental support sources (travel funds, staff, secretary, etc.)	23
0	1	2	3	4	5	L. Computer facilities for faculty use	24
0	1	2	3	4	5	M. Upgrading/maintenance of computer facilities	25
0	1	2	3	4	5	N. Computer facilities for classroom use	26
0	1	2	3	4	5	O. Office/lab facilities	27
0	1	2	3	4	5	P. Classroom/lab facilities	28
0	1	2	3	4	5	Q. Coordinating and/or developing math. for vocational/technical programs	29
0	1	2	3	4	5	R. Coordinating math. courses with 4-year colleges and universities	30
0	1	2	3	4	5	S. Coordinating math. courses with high schools	31

* * *

Information supplied by: _____

Title: _____

Telephone: _____
Area Code Number Extension

1. How long have you been in charge of the mathematics program? _____ years 32-33
2. Is the chairmanship rotating? _____ yes _____ no 34

   If yes, what is the frequency of rotation? _____ 35
3. If you have found any of the above survey questions difficult to interpret or to secure data for, please supply elucidating comments or suggestions which would be helpful to the Committee in future surveys:

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REMEDIAL MATHEMATICS QUESTIONNAIRE

1. Give the name of the academic unit (or division) administering the remedial (developmental) mathematics program at your institution.

   a) _____ (If not the mathematics dept., please answer b and c.) 25-26

   b) Give time when unit was established

   _____ Before 1975 _____ 1975-79 _____ 1980-85 27

   c) Does the unit report to the same academic administrator as does the mathematics department? _____ Yes _____ No 28

2. Do you have follow-up studies on success rates of students in post-remedial math courses or on eventual graduation:

   _____ Yes (Give name of contact person. _____) 29

   _____ No

3. For which standard course(s) do remedial mathematics courses prepare students?

   _____ (a) College Algebra _____ (d) Finite Mathematics 30-31

   _____ (b) Elementary Functions _____ (e) Other (Specify name: 32-33

   _____ (c) Precalculus _____) 34

4. Staff qualifications and status (for remedial program only).

   _____ (a) Number of full-time faculty 35-36

   _____ (b) Number of part-time faculty 37-38

   _____ (c) Number of full-time faculty on tenure track 39-40

   _____ (d) Number of full-time faculty who are tenured 41-42

5. Give numbers for full- and part-time faculty (combined) who staff the remedial mathematics program:

Highest Degree \ Field of Degree	Mathematics	Math. Ed.	OTHER	
Doctor's				43-48
Master's				49-54
Bachelor's				55-60
No degree				61-66

Please see reverse side.

6. Credit status of remedial courses. Please complete the following table:

Course Title	Is course load credit normally given? YES	Is course load credit normally given? NO	Is credit toward graduation given? YES	Is credit toward graduation given? NO	
Arithmetic					67 / 68
General Math. (Basic Skills, Operations)					69 / 70
Elementary Algebra (High School)					71 / 72
Intermediate Algebra (High School)					73 / 74
Other					75 / 76

7. Remedial Course Enrollments: (If your unit filled out the main questionnaire, columns (2) and (3), rows (a) to (d), are from Question 3A there.)

(1)	(2) Total No. of Students Enrolled Fall, 1985	(3) Total No. of Sections	(4) No. Sections Taught by Part-time Faculty	
(a) Arithmetic				7-14
(b) General Math. (Basic Skills, Operations)				15-22
(c) Elementary Alg. (High School)				23-30
(d) Intermed. Alg. (High School)				31-38
(e) Other				39-46

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* * *

Information supplied by: _____ Title & Dept.: _____

Institution & Campus: _____ Phone: _____

Date: _____

Please return completed questionnaire by 27 November 1985 to:

Conference Board of the Mathematical Sciences
1529 Eighteenth Street, N.W.
Washington, D.C. 20036