

APPENDIX IV

FOUR-YEAR COLLEGE SURVEY

Conference Board of the Mathematical Sciences

SURVEY OF UNDERGRADUATE PROGRAMS in the MATHEMATICAL SCIENCES AND COMPUTER SCIENCE 1990

GENERAL INSTRUCTIONS

You are asked to report on programs in the mathematical sciences (including applied mathematics, statistics, operations research) and computer science under the cognizance of your department. This questionnaire is being sent to each department in the mathematical sciences or computer science on your campus. It is **not** being routinely sent to computer centers or to non-departmental groups or programs.

Because departments vary in course offerings and faculty composition, some questions (or parts of questions) may not be applicable to your department. Please read the instructions carefully and complete all pertinent questions. In some departments information for this survey might be obtained from other sources, e.g., undergraduate officer or librarian.

Do **not** include data for branches or campuses of your institution that are geographically or budgetarily separate.

If you have any questions, please call Monica Foulkes at 1-800-321-4267.

Please return your completed questionnaire by November 1, 1990, to:

CBMS Survey
Attn: Monica Foulkes
American Mathematical Society
PO Box 6248
Providence, RI 02940-6248

Please do not
write in this space

1. Name of your institution: _____

Name of your department: _____

2. A. Your department offers programs leading to the following degrees (check all boxes that apply):

	None	Bachelor's	Master's	Doctor's
Mathematical sciences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Computer science	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

B. Your academic calendar is:

Semester Trimester Quarter 4-1-4 Other (specify)

3. Regular Undergraduate Program Courses, Fall 1990

Instructions for question 3:

- The undergraduate courses in column (1) in the following tables are listed in four groups corresponding roughly to a division into mathematics, statistics, operations research, and computer science. Within each group the courses are listed in approximate "catalog order" for your convenience in locating a listing that is a reasonable approximation to your offerings. If some of your courses do not fit our descriptions, or you have different levels of the same course, find the best approximation and enter your total fall 1990 enrollment and number of sections. Please do not double count. Additional spaces are provided to permit you to write in names of courses that do not fit reasonably under some listed title.
- Enter in column (2) the total number of students enrolled for fall 1990 and in column (3) the total number of sections of the course in the fall of 1990. If a course is not being taught in the fall of 1990 enter "0" (zero) in column (2). For advanced courses there is an additional column on frequency of offering. For some calculus-level courses and computer science courses there are additional columns asking for further information.

Name of Course (or equivalent) 0)	Total Number of Students Enrolled Fall 1990 (2)	Total Number of Sections (3)
3.A. MATHEMATICS		
Remedial level		
1. Arithmetic		
2. General Mathematics (basic skills, operations)		
3. Elementary Algebra (high school)		
4. Intermediate Algebra (high school)		
Precalculus-level		
5. College Algebra		
6. Trigonometry		
7. College Algebra & Trigonometry, combined		
8. Elementary Functions, Precalculus Mathematics		
9. Mathematics for Liberal Arts		
10. Finite Mathematics		
11. Business Mathematics (including Introduction to Calculus)		
12. Mathematics for Elementary School Teachers		
13. Analytic Geometry		
14. Other Precalculus		

Please do not
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this space

3. Regular Undergraduate Program Courses, Fall 1990 (Continued)

Name of Course (or equivalent) 0)	Total Number of Students Enrolled Fall 1990 (2)	Total Number of Sections (3)	Of the number in column (3) how many sections -			
			assign group projects (4)	use graphing calculators (5)	include writing com- ponents (6)	require computer assignments (7)
Calculus-level						
15. Mainstream* Calculus I						
16. Mainstream* Calculus II						
17. Mainstream* Calculus III (and IV, etc.)						
18. Non Mainstream Calculus I						
19. Non Mainstream Calculus II (and III, etc.)						
20. Differential Equations						
21. Discrete Mathematics						
22. Introduction to Mathematical Logic						
23. Linear Algebra or Matrix Theory						
24. Other Calculus-level						
Advanced Level 0)	(2)	(3)	If not offered in fall 1990, was it offered in 1989-90 or is it scheduled for spring 1991? Yes (4) No			
25. Transition (Introduction) to Proofs			<input type="checkbox"/>		<input type="checkbox"/>	
26. Modern Algebra			<input type="checkbox"/>		<input type="checkbox"/>	
27. Number Theory			<input type="checkbox"/>		<input type="checkbox"/>	
28. Combinatorics			<input type="checkbox"/>		<input type="checkbox"/>	
29. Graph Theory			<input type="checkbox"/>		<input type="checkbox"/>	
30. Coding Theory			<input type="checkbox"/>		<input type="checkbox"/>	
31. Actuarial Mathematics			<input type="checkbox"/>		<input type="checkbox"/>	
32. Foundations of Mathematics			<input type="checkbox"/>		<input type="checkbox"/>	
33. Set Theory			<input type="checkbox"/>		<input type="checkbox"/>	
34. Discrete Structures			<input type="checkbox"/>		<input type="checkbox"/>	

Please do not
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this space

* A calculus course is mainstream if it leads to the usual upper division mathematical science courses.

3. Regular Undergraduate Program Courses, Fall 1990 (Continued)

Please do not write in this space

Name of Course (or equivalent) (1)	Total Number of Students Enrolled Fall 1990 (2)	Total Number of Sections (3)	If not offered in fall 1990, was it offered in 1989-90 or is it sched- uled for spring 1991?	
			Yes (4)	No
35. History of Mathematics			<input type="checkbox"/>	<input type="checkbox"/>
36. Geometry			<input type="checkbox"/>	<input type="checkbox"/>
37. Mathematics for Secondary School Teachers (methods, etc.)			<input type="checkbox"/>	<input type="checkbox"/>
38. Mathematical Logic			<input type="checkbox"/>	<input type="checkbox"/>
39. Advanced Calculus			<input type="checkbox"/>	<input type="checkbox"/>
40. Advanced Mathematics for Engineering and Physics			<input type="checkbox"/>	<input type="checkbox"/>
41. Vector Analysis, Advanced Linear Algebra			<input type="checkbox"/>	<input type="checkbox"/>
42. Advanced Differential Equations			<input type="checkbox"/>	<input type="checkbox"/>
43. Partial Differential Equations			<input type="checkbox"/>	<input type="checkbox"/>
44. Numerical Analysis			<input type="checkbox"/>	<input type="checkbox"/>
45. Applied Mathematics, Mathematical Modeling			<input type="checkbox"/>	<input type="checkbox"/>
46. Complex Variables			<input type="checkbox"/>	<input type="checkbox"/>
47. Real Analysis			<input type="checkbox"/>	<input type="checkbox"/>
48. Topology			<input type="checkbox"/>	<input type="checkbox"/>
49. Senior Seminar/Independent Study in Mathematics			<input type="checkbox"/>	<input type="checkbox"/>
50. Other Mathematics			<input type="checkbox"/>	<input type="checkbox"/>
3.A TOTAL NO. OF MATHEMATICS SECTIONS				

3. Regular Undergraduate Program Courses, Fall 1990 (Continued)

Please do not write in this space

Name of Course (or equivalent) 0)	Total Number of Students Enrolled Fall 1990 (2)	Total Number of Sections (3)	Of the number in column (3) how many sections require regular computer assignments? (4)
3.B. STATISTICS			
Elementary Level			
51. Elementary Statistics (no Calculus prerequisite)			
52. Probability and Statistics (no Calculus prerequisite)			
53. Probability (no Calculus required)			
Upper Level			
			If not offered in fall 1990, was it offered in 1989-90 or is it sched- uled for spring 1991? Yes (4) No
54. Mathematical Statistics (Calculus)			<input type="checkbox"/> <input type="checkbox"/>
55. Probability (Calculus)			<input type="checkbox"/> <input type="checkbox"/>
56. Stochastic Processes			<input type="checkbox"/> <input type="checkbox"/>
57. Applied Statistical Analysis			<input type="checkbox"/> <input type="checkbox"/>
58. Design and Analysis of Experiments			<input type="checkbox"/> <input type="checkbox"/>
59. Regression (and Correlation)			<input type="checkbox"/> <input type="checkbox"/>
60. Senior Seminar/Independent Studies in Statistics			<input type="checkbox"/> <input type="checkbox"/>
61. Other Statistics			<input type="checkbox"/> <input type="checkbox"/>
3.B TOTAL NO. OF STATISTICS SECTIONS			
3.C. OPERATIONS RESEARCH			
62. Introduction to Operations Research			<input type="checkbox"/> <input type="checkbox"/>
63. Introduction to Linear Programming			<input type="checkbox"/> <input type="checkbox"/>
64. Other Operations Research			<input type="checkbox"/> <input type="checkbox"/>
3.C TOTAL NO. OF OPERATIONS RESEARCH SECTIONS			

3. Regular Undergraduate Program Courses, Fall 1990 (Continued)

In columns (4) - (8) answer YES or NO for each scheduled course.

a **A closed laboratory** is a regularly scheduled laboratory session (usually from 1 to 3 hours/week) during which students work on lab projects under direct supervision of a lab instructor.

b **An open laboratory** is used by students at their convenience (usually with assistance available).

c '78 refers to courses described in Curriculum 78, *Communications* of the Association for Computing Machinery, Vol. 22, No. 3 (March 1979) 147-166.

d '84 refers to courses described in *Communications* of the Association for Computing Machinery, Vol. 27, No. 10 (October 1984) 998-1001.

e '85 refers to courses described in *Communications* of the Association for Computing Machinery, Vol. 28, No. 8 (August 1985) 815-818.

Please do not write in this space

Name of Course (or equivalent) (1)	Total Number of Students Enrolled Fall 1990 (2)	Total Number of Sections (3)	Required Closed Lab ^a		Required Open Lab ^b		Do students in this course use						
			(4)		(5)		Micro? (6)		Mini/ Main- frame? (7)		Sci Work Station? (8)		
			Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	
3.D. COMPUTER SCIENCE													
Lower Level													
65. Computers and Society													
66. Introduction to Software Packages													
67. Issues in Computer Science													
68. Computer Programming I (CS1 '78 ^c or CS1 '84 ^d)													
69. Computer Programming II (CS2 '78 ^c)													
70. Advanced Programming & Data Structures (CS2 '85 ^e)													
71. Database Management Systems													
72. Discrete Mathematics													
73. Other lower level service courses													
Middle Level													
74. Introduction to Computer Systems (CS3)													
75. Assembly Language Programming													
76. Introduction to Computer Organization													
77. Introduction to File Processing (CS5)													

3. Regular Undergraduate Program Courses, Fall 1990 (Continued)

Name of Course (or equivalent) (1)	Total Number of Students Enrolled Fall 1990 (2)	Total Number of Sections (3)	Required Closed ^a Lab (4)		Required Open ^b Lab (5)		Do students in this course use					
							Micro? (6)		Mini/ Main- frame? (7)		Sci Work Station? (8)	
			Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
3.D. COMPUTER SCIENCE (CONTD.)												
Upper Level												
78. Operating Systems and Computer Architecture												
79. Operating Systems												
80. Computer Architecture												
81. Compiler Design												
82. Computer Graphics												
83. Data Structures (CS7)												
84. Survey of Programming Languages												
85. Computers and Society (CS9)												
86. Operating Systems and Computer Archit. II (CS10)												
87. Principles of Database Design												
88. Artificial Intelligence (CS12)												
89. Other topics in A.I. (e.g. visual, neural nets)												
90. Expert Systems												
91. Discrete Structures												
92. Algorithms (CS13)												
93. Software Design and Development (CS14)												
94. Principles of Programming Languages												
95. Other topics in program- ing Lang. (e.g. visual lang.)												
96. Automata, Computability & Formal Languages (CS16)												
97. Automata Theory												

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3. Regular Undergraduate Program Courses, Fall 1990 (Continued)

Name of Course (or equivalent) (1)	Total Number of Students Enrolled Fall 1990 (2)	Total Number of Sections (3)	Required Closed ^a Lab (4)		Required Open ^b Lab (5)		Do students in this course use					
			Micro?		Mini/ Main- frame?		Sci Work Station?					
			Yes	No	Yes	No	Yes	No	Yes	No	Yes	No

Please do not write in this space

3.D. COMPUTER SCIENCE (CONTD.)

98. Numerical Mathematics: Analysis (CS17)															
99. Numerical Methods															
100. Numerical Mathematics: Linear Algebra (CS18)															
101. Computer Networks															
102. Modeling and Simulation															
103. Parallel Architecture or Algorithms															
104. Other topics in graphics (e.g. geometric modeling)															
105. Semantics & Verification															
106. Complexity															
107. Computational Linguistics															
108. Senior Seminar/Independent Study in CS															
109. Other Computer Science															
3.D TOTAL NO. OF COMPUTER SCIENCE SECTIONS															

4. Last Year's Enrollment.

Responses to this question will be used to project total enrollment for this academic year, 1990-91, by the pattern of enrollment for the previous academic year, 1989-90.

The total student enrollment in your undergraduate courses was:

_____ for fall 1989

_____ for entire academic year 1989-90

5. Instructional Formats.

In the table below are listed four courses from the list in question 3, with the number in parentheses below the course title the same as in question 3. For each course please **enter the number of sections taught during the fall of 1990** in each of the formats listed in the column headings. The total for each course should equal the number of sections of this course reported in question 3. If a course was not offered by your department during fall 1990, leave blank.

Please do not write in this space

	Number of sections of course being taught in fall 1990 in each format					
	Small class (less than 40)	Large class (40 to 80)	Lecture without quiz sections (over 80)	Lecture with quiz sections (over 80)	Other format	Total
Mainstream Calculus I (15)						
Non mainstream Calculus I (18)						
Elementary Statistics (51)						
Computer Program- ming I (68)						

6. Mathematical Sciences and Computer Science Faculty, Fall 1990.

Some departments may have faculty in each of the following categories; others may not. For faculty members with joint appointments, include them if your department is primary. Please enter each member of your faculty (full or part-time) in one section only of 6.A, 6.B, 6C or 6.E, as relevant.

A. Full-time faculty teaching only departmental mathematical sciences courses.

Report the **number of full-time faculty** in your department who regularly teach only departmental mathematical sciences courses, including statistics (but not including computer science), by doctor's degree or other degree. Report all full-time faculty, including those on leave, whether tenured, tenure-eligible, fixed term, etc. Do not include visitors.

Doctor's degree _____ Other degrees _____

B. Full-time faculty teaching only departmental computer science courses.

Report the **number of full-time faculty** in your department who regularly teach only departmental computer science courses by highest degree earned and subject field in which it was earned. Report all full-time faculty, including those on leave, whether tenured, tenure-eligible, fixed term, etc. Do not include visitors.

Highest degree \ Subject field of degree	Mathematical sciences	Computer science	Other fields
Doctor's degree			
Other degrees			

6. Mathematical Sciences and Computer Science Faculty, Fall 1990 (Contd.)

Please do not write in this space

C. Full-time faculty teaching both departmental mathematical sciences and computer science courses.

Report the number of full-time faculty in your department who regularly teach both mathematical sciences and computer science courses by highest degree earned and subject field in which it was earned. Report all full-time faculty, including those on leave, whether tenured, tenure-eligible, fixed term, etc. Do not include visitors.

Highest degree \ Subject field of degree	Mathematical sciences	Computer science	Other fields
Doctor's degree			
Other degrees			

D. For the full-time faculty reported in 6.A, 6.B, and 6.C above, how many have:

a private, fully enclosed office? _____

a two-person, fully enclosed office? _____

other? _____

E. Faculty teaching part-time.

Report the **number** of faculty teaching part-time in your department. Do not include teaching assistants.

	Male	Female
i. Faculty teaching only departmental mathematical sciences courses in fall 1990, part-time		
ii. Faculty teaching only departmental computer science courses in fall 1990, part-time		
iii. Other part-time faculty		

F. Part-time Computer Science Faculty, as reported in question 6.E.ii above.

Report the **number of faculty teaching computer science part-time** in your department by highest degree and subject field in which it was earned.

(If the number is zero, check here: _____)

Highest degree \ Subject field of degree	Mathematical sciences	Computer science	Other fields
Doctor's degree			
Other degrees			

8. C. Faculty: Sex and Racial/Ethnic Group.

Please report the **number of your full-time faculty** given in 6.A, 6.B and 6.C who are:

Please do not write in this space

	Male	Female
American Indian/Alaskan native		
Asian/Pacific Islander		
Black, not of Hispanic origin		
Mexican American, Puerto Rican or other Hispanic		
White, not of Hispanic origin		

9. Teaching Load.

For fall 1990, report the expected (or typical) weekly teaching load in **classroom contact hours** for your full-time mathematical sciences and computer science faculty given in 6.A, 6.B and 6.C (excluding thesis supervision).

	Mathematical Sciences (other than statistics)	Statistics	Computer Science
A. Professors (Assistant, Associate, Full)			
B. Instructors and Lecturers			

10. Retirements and Deaths.

For the period September 1, 1989 to August 31, 1990, report the **number** of your regular departmental faculty who:

retired from full-time service _____ died _____

11. Departmental Bachelor's Degrees.

A. Report the **number of bachelor's degrees** with majors in a mathematical or computer science awarded by your department between July 1, 1989 and June 30, 1990: _____

B. Of the number in 11.A, report the **number who majored in:**

	Male	Female
Mathematics (including Applied)		
Mathematics Education		
Computer Science		
Statistics		
Actuarial Mathematics		
Operations Research		
Joint Computer Science & Mathematics		
Joint Mathematics and Statistics		
Joint Computer Science & Statistics		
Other		

C. Of the number in 11.A, report **how many** completed the requirements for secondary level certification in your state: _____

Please do not write in this space

Department Support.

12. Report the number of departmental support staff positions currently supported from institutional funds: _____
13. Report the total departmental travel funds expended from institutional funds during the last full fiscal year: \$ _____

14. Services to departmental majors.

Please indicate which of the following are available to your departmental majors. Check YES or NO for each item.

Available to departmental majors

	Yes	No	
A. Departmental or institutional math placement exams for entering (intended) majors	<input type="checkbox"/>	<input type="checkbox"/>	A
B. Honors calculus sections for (intended) majors	<input type="checkbox"/>	<input type="checkbox"/>	B
C. College credit for high scores on the advanced placement exams given by Educational Testing Service	<input type="checkbox"/>	<input type="checkbox"/>	C
D. College credit for high scores in departmental or institutional placement exams	<input type="checkbox"/>	<input type="checkbox"/>	D
E. Intern/cooperative program	<input type="checkbox"/>	<input type="checkbox"/>	E
F. Special lectures/colloquium	<input type="checkbox"/>	<input type="checkbox"/>	F
G. Special study areas	<input type="checkbox"/>	<input type="checkbox"/>	G
H. Active mathematics and/or computer science club	<input type="checkbox"/>	<input type="checkbox"/>	H
I. Regularly offer opportunity to solve problems, prepare for mathematical contest in modeling, actuarial exams, etc., with direct faculty involvement	<input type="checkbox"/>	<input type="checkbox"/>	I
J. Departmental or institutional honors program	<input type="checkbox"/>	<input type="checkbox"/>	J
K. Research projects	<input type="checkbox"/>	<input type="checkbox"/>	K
L. Comprehensive (senior) exam(s)	<input type="checkbox"/>	<input type="checkbox"/>	L
M. Senior project or thesis	<input type="checkbox"/>	<input type="checkbox"/>	M
N. Regular program of social activities involving majors and faculty	<input type="checkbox"/>	<input type="checkbox"/>	N
O. Graduate school advising	<input type="checkbox"/>	<input type="checkbox"/>	O
P. Other career advising	<input type="checkbox"/>	<input type="checkbox"/>	P

15. Information on mathematical sciences major programs in your department.

This question pertains **ONLY** to mathematical sciences majors, not computer science or joint majors. Please interpret "require" and "requirements" to include courses taken by contract or by general consensus, even though occasional exceptions occur.

A. How many distinct options (or tracks, etc.) do you offer for mathematical sciences majors in your department? _____

- B. Of these options,**
- i. how many require at least six courses (semester length or equivalent) at the advanced junior-senior level? _____
 - ii. how many require a junior-senior level course in analysis/advanced calculus? _____
 - iii. how many require a junior-senior level course in modern algebra? _____
 - iv. how many require a junior-senior level course in geometry/topology? _____
 - v. how many require a junior-senior level course in linear algebra? _____
 - vi. how many require a junior-senior level course in problem solving and/or modeling? _____
 - vii. how many require at least one sequence of two (or more) courses? _____

Please do not write in this space

Mathematical Sciences Library.

Questions 16-22 are to be answered **ONLY** by the mathematics (or mathematical sciences) department, and are NOT to be answered by any other department(s), e.g., statistics, computer science, operations research.

For questions 16-22 "mathematical sciences library" means the main mathematical sciences collection used by the mathematical sciences faculty and are those titles with QA (Library of Congress) or 510-519 (Dewey) designation.

16. Description of mathematical sciences library.

A. Check the box that best describes your mathematical sciences library:

- i. Part of a separate mathematical sciences and/or computer science library.
- ii. Contained within a larger library unit.
- iii. Other (describe): _____

B. If you checked box (ii) or (iii) above, do you have a departmental reading room? Yes No

C. Are all (or most) current unbound mathematical sciences journals displayed separately (either in a library or reading room)? Yes No

17. The catalog of the mathematical sciences library is: (Check all boxes that apply)

- A. in manual card form only
- B. partly manual and partly online with access from faculty offices
- C. completely online with access from faculty offices
- D. in other form such as microform (describe) _____

18. Electronic products available inhouse in the mathematical sciences library are: (Check all boxes that apply)

- A. MathSci tapes (full database) with access from faculty offices
- B. MathSci on CD ROM with access from faculty offices
- C. Science Citation Index on CD ROM with access from faculty offices

19. Report the **number of currently received mathematical sciences journal titles** in the mathematical sciences library. _____

20. Report the **approximate number of volumes** in the mathematical science holdings (QA or 510-519) that are:
 A. shelved in the mathematical sciences library _____
 B. in remote storage _____

21. In a typical full (seven day) week in this academic year, approximately **how many total hours** is the mathematical sciences library open to students? _____

22. For the last five years, which **best describes** the overall effectiveness of the mathematical sciences library ⁱⁿ these areas?

	Improved	Little change	Deteriorated
A. collection of books and journals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. physical facilities (including space)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. staffing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. hours of opening	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. budget	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please do not write in this space

Questions 23-26 are to be answered **ONLY** by departments having a computer science major.

23. Of the number of students taking departmental courses using computers in fall 1990, report the **average number** of student enrollments per computer station (inc. terminals, pc's etc.) by checking the appropriate box:

0-5	6-10	11-15	16-20	21 or more
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

24. Of the non computer science courses listed in question 3A, 3B, and 3C, **encircle** (by code numbers in question 3) those required for computer science majors:

15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	

25. Report the **total number** of mathematical sciences credit hours (semester hours or equivalent) at the calculus level and above normally taken by computer science majors. _____

26. Please **rate the accessibility** of computer stations (including terminals, pc's etc.) both for students in your classes and for homework assignments. Check the appropriate box for each level of class given in question 3.D:

Class	Poor	Adequate	Good	Very good	Superb
Lower level (#65-73)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Middle level (#74-77)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Upper level (#78-109)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

27. The approximate number of hours required to complete this questionnaire was: _____

If you have found some question(s) difficult to interpret or answer, please let us know. We welcome comments or suggestions for future surveys.

Information supplied by: _____

Title and Department: _____

Institution and Campus: _____

Street City State Zip

Telephone: (_____) _____ Date: _____

Please return completed questionnaire by November 1, 1990, to:
American Mathematical Society, Attn: M. Foulkes,
P.O. Box 6248, Providence, RI 02940-6248

Thanks to all who helped in completing this survey;
 I appreciate the time spent.

Donald C. Rung

