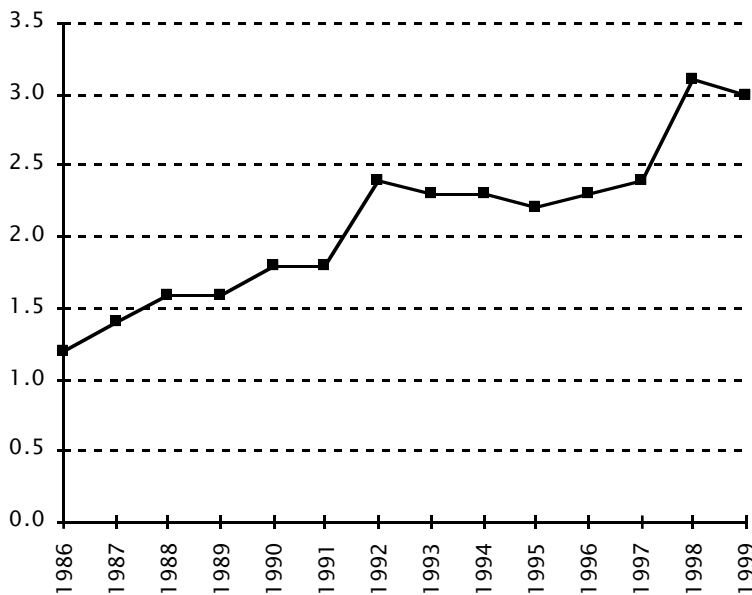


Table 7A: Faculty Attrition¹

	GROUP									
	I Public	I Private	II	III	I, II, & III	IV	Va	M	B	I, II, III, M & B
Full-time faculty who retired or died										
Total number	47	14	64	50	175	30	5	152	225	553
Percentage (%)	2.9	1.8	2.6	2.4	2.5	2.2	1.7	3.4	3.2	3.0

¹ Number and percentage of full-time faculty who were in the department in fall 1998 but were reported to have retired or died by fall 1999.

Figure 7B: Percent of Full-Time Doctoral Faculty Who Retired or Died in Groups I, II, III, M & B Combined



Faculty Profile

The Departmental Profile Survey, sent in fall 1999 to mathematical sciences departments at four-year colleges and universities as part of the Annual Survey, gathered information about faculties at these schools, which is reported in this section. All numbers in tables are projections made using data from responding departments. For the first time this year, projections for Groups M and B are based on respondents in a stratified random sample for each group. This method should provide estimates for M and B parameters which are more accurate, hence provide more reliable year to year comparisons. In addition to the information reported here, the First Report presented data collected earlier about faculty salaries (pages 239-42 of the February 2000 issue of the *Notices of the AMS*).

Table 7A displays losses of full-time mathematical sciences faculty due to retirements and deaths. The fall 1999 mathematics faculty attrition rate for Groups I, II, III, M, and B combined was 3.1% compared with fall 1998, 1997, and 1996 values of 3.1%, 2.4%, and 2.3%. Groups M

Table 7C: Recruitment of Doctoral Faculty

	GROUP									
	I Public	I Private	II	III	I, II, & III	IV	Va	M	B	I, II, III, M & B
Posted Doctoral Positions										
Total number ¹	157	105	173	164	599	129	28	309	602	1510
Tenured/tenure-track	64	33	99	120	316	100	5	258	422	996
Open to new doctoral recipients	116	75	138	136	464	100	23	253	550	1267
Tenured/tenure-track	32	10	83	98	223	74	0	253	384	859
Open at assoc/full level	27	19	20	29	94	40	4	14	88	196
Reported Hires for Above										
Male doctoral hires	126	82	125	108	441	70	18	144	309	894
Male new doctoral hires	56	40	51	41	188	38	7	47	183	418
Female doctoral hires	15	16	20	27	78	18	9	47	120	245
Female new doctoral hires	7	10	12	16	45	6	5	24	61	130
Male nondoctoral hires	2	0	4	0	6	0	0	8	33	47
Female nondoctoral hires	0	0	1	5	6	0	0	28	40	73
Unfilled positions	14	7	23	24	68	41	2	82	101	251

¹ Number of full-time doctoral positions under recruitment in 1998-99 to be filled for 1999-2000. Subtotals of rounded table values may exhibit rounding errors.

and B had the highest attrition rates at 3.4% and 3.2% respectively. Figure 7B graphically shows the trend in this attrition rate for mathematics departments during the years 1986 to 1999. For the most part, the attrition rate has been growing, going from 1.2% in 1986 to 3.0% in 1999.

Table 7C contains detailed information on the number of full-time faculty positions in mathematical sciences departments under recruitment in 1998-99 for academic year 1999-2000. Table 7D is a brief summary of Table 7C. The 1,510 positions in mathematics departments (Groups I, II, III, M, and B) under recruitment is down slightly, 1.2%, compared to 1997-98. Figure 7E shows the number of full-time doctoral positions available in these groups and the number unfilled for the years 1990 to 1999. There was a steady decrease in available positions in the first half of the decade of the '90s, but this number has been increasing since 1996.

Table 7C shows that 1,267 (83.9%) of the positions under recruitment in 1998-99 by Groups I, II, III, M, and B were available to new doctorates. Of these 1,267 positions only 859 (67.8%) were tenure-track positions. The 859 tenure-track positions open to new doctorates is down slightly from the 890 such positions in 1997-98.

Tables 7F and 7G give a detailed picture of the faculty in mathematical sciences departments. Table 7F gives the number of faculty for six different variables for all faculty broken down by group. Table 7G gives the same information for females only. The estimated total number of full-time faculty in Groups I, II, III, M, and B combined is 18,490, down 1,202 from the number reported last year. Group M is down 539 full-time faculty, while Group B is down 825 and Groups I, II, and III are up 162 full-time faculty. For Groups M and B other faculty numbers show drops as well. The authors do not believe there has been a big drop in full-time faculty numbers in Groups M and B and offer the following three comments about these drops.

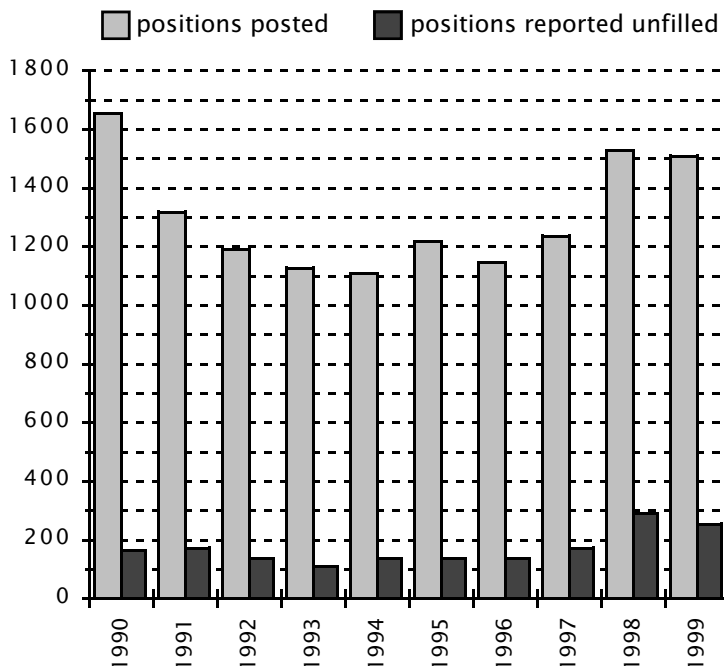
1. The Group B estimates for last year were most likely too high. Estimates of full-time faculty for Group B for the past three years are fall 1997 at 7,306, fall 1998 at 7,926, and fall 1999 at 7,101. If this conjecture is true, then it explains that much of the drop in B numbers for this year compared to last year.

2. Stratified random samples were used to produce the Group M and B results for the first time this year. The M and B estimates obtained in this way should be more accurate estimates than those obtained in the past and should show less variation from year to year in the future. Our feeling is that in the past Group B estimates have tended to be on the high side, with the same

Table 7D: A Summary of Recruitment of Doctoral Faculty

	GROUP		
	I, II, III, Va, M, & B	IV	Total
Posted Doctoral Positions			
Total number	1538	129	1667
Tenured/tenure-track	1001	100	1101
Open to new doctoral recipients	1290	100	1390
Reported Hires for Above			
Total doctoral hires	1166	88	1254
Male	912	70	982
Female	254	18	272
Unfilled positions	253	41	294

Figure 7E: Number of Full-Time Doctoral Positions under Recruitment and Reported as Unfilled in Groups I, II, III, M & B Combined



thing possibly true for the Group M schools. The estimates of Groups M and B faculty numbers for this year are somewhat low compared to other recent years, and this probably accounts for some of the drop in their faculty numbers for this year. It is a little hard to say exactly what is happening until we get numbers for a few more years using the new sampling methods put into place this year.

3. Even with all the other Group M numbers dropping, the number of part-time faculty increased by 138 compared to last year. This could mean less full-time faculty.

Table 7F: Faculty Size, Fall 1999

	GROUP									
	I Public	I Private	II	III	I, II, & III	IV	Va	M	B	I, II, III, M & B
Full-time faculty	1584	821	2440	2069	6913	1338	309	4476	7101	18490
Doctoral full-time faculty	1535	815	2305	1817	6473	1297	308	3745	5094	15312
Tenured doctoral full-time faculty	1158	497	1790	1351	4795	906	172	2766	3502	11064
Untenured, tenure-track doctoral full-time faculty	118	114	242	297	770	245	28	833	1078	2680
Non-tenure-track doctoral full-time faculty	259	204	274	170	907	146	107	146	514	1567
Part-time faculty	166	43	278	705	1192	161	25	1906	3298	6395

Table 7G: Female Faculty Size, Fall 1999

	GROUP									
	I Public	I Private	II	III	I, II, & III	IV	Va	M	B	I, II, III, M & B
Full-time female faculty	165	85	324	417	991	255	30	1242	2174	4407
Doctoral full-time female faculty	133	83	245	274	735	229	30	807	1277	2819
Tenured, doctoral full-time female faculty	74	23	112	137	346	98	9	491	789	1626
Untenured, tenure-track doctoral full-time female faculty	19	20	53	91	183	84	7	234	366	783
Non-tenure-track doctoral full-time female faculty	40	40	81	46	206	47	14	82	122	410
Part-time female faculty	66	9	120	260	455	38	5	670	1343	2468

Table 7H: Number and Percentage of Full-time Faculty by Group, Fall 1999

	GROUP									
	I Public	I Private	II	III	IV	Va	M	B	I, II, III, IV, Va, M, & B	
Full-time Faculty Number	1584	821	2440	2069	1338	309	4476	7101	20137	
Percentage of full-time faculty	7.9	4.1	12.1	10.3	6.6	1.5	22.2	35.3		
Female Full-time Faculty Number	165	85	324	417	255	30	1242	2174	4692	
Percentage of female full-time faculty	3.5	1.8	6.9	8.9	5.4	0.6	26.5	46.3		
Female Full-time Faculty Percentage female full-time faculty in each group	10.4	10.4	13.3	20.2	19.1	9.7	27.7	30.6	23.3	

The number of non-tenure-track doctoral full-time faculty has been increasing rapidly in recent years. The number of such full-time faculty for Groups I, II, III, M, and B combined for the most recent four years is 1,175 in 1996, 1,269 in 1997, 1,411 in 1998, and 1,567 in 1999. This increase in non-tenure-track full-time doctoral positions continues a disturbing trend reported in "Changes in Mathematics Faculty Composition, Fall 1990–Fall 1996" (*Notices of the AMS*, November 1997, pages 1321–3.) This article is a much more refined analysis of the changes in mathematics faculties than can be done with the data reported here. There are plans to update this study in the future.

Table 7J: Summary of Full-time Faculty by Sex, Fall 1999

	GROUP			
	I, II, & III		I, II, III, IV, Va, M & B	
	Male	Female	Male	Female
Full-time faculty				
Number	5922	991	15445	4692
Percentage	85.7	14.3	76.7	23.3
Doctoral full-time faculty				
Number	5738	735	13839	3078
Percentage	88.6	11.4	81.8	18.2
Tenured doctoral full-time faculty				
Number	4449	346	10409	1733
Percentage	92.8	7.2	85.7	14.2
Untenured, tenure-track doctoral full-time faculty				
Number	587	183	2079	874
Percentage	76.2	23.8	70.4	29.6
Non-tenure-track doctoral full-time faculty				
Number	701	206	1049	471
Percentage	77.3	22.7	74.1	25.9
Part-time faculty				
Number	737	455	4070	2511
Percentage	61.8	38.2	61.8	38.2

Faculty Profile for Females

In this section full-time faculty for all groups is used. The total number of full-time faculty in all groups for 1999–2000 is 20,137, of which 4,692 (23.3%) are females. Table 7H shows the number and percentage of all full-time faculty that fall in each group for 1999–2000 and the number and percentage of all female full-time faculty that fall in each group for 1999–2000. In addition, the percentage of the full-time faculty in each group who are female is given in the bottom section of Table 7H. We see that female full-time faculty are underrepresented in all groups except M and B, where they are overrepresented relative to the 23.3% of all full-time faculty who are females. Note: In Table 7H the percentages for each group in rows 2 and 4 are of the row

totals. The percentages in row 5 are column percents using the numbers in rows 1 and 3.

Table 7J gives the male/female breakdown by count and percentage for Groups I, II, and III combined for various categories of faculty in columns 1 and 2. Columns 3 and 4 give the same breakdowns for all groups combined. The percentage of females for each category of full-time faculty members in Groups I, II, and III combined is always less than the percentage of females for all groups combined for the same category.