FOOTHILL COLLEGE
Institutional Research and Planning

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RE: Math 1A-Math1B-Math 1C Pathway Progression, 2011-12 to 2014-15

Overview

Students who enrolled in Math 1A between 2011-12 and 2014-15 are tracked to determine their progression through the Calculus sequence (Math 1A-Math 1B-Math 1C). Enrollment through the Calculus pathway is analyzed for one-year and two-year completion time frames (with the exception of the 2014-15 cohort).

Among the 2011-12 cohort, 276 F1 students and 369 non-F1 students enrolled in Math 1A, adding up to a total of 645 students (Table 1). Within this cohort, 198 (72%) F1 students and 144 (39%) non-F1 students successfully completed the course. These students are tracked to determine their progression through Math 1C in one and two years. Within one year, 27 (10%) F1 students and 20 non-F1 (5%) students successfully completed the Math 1A-Math 1B-Math 1C sequence.

Table 1. 2011-12 Math 1A-Math 1B-Math 1C Cohort Tracked for One Year.

Starting Level	Attempt Math 1A	Pass Math 1A	Attempt Math 1B	Pass Math 1B	Attempt Math 1C	Pass Math 1C
Math 1A F1	276	198	127	95	35	27
Math 1A non-F1	369	144	107	67	28	20
% of F1 starting cohort	100%	72%	46%	34%	13%	10%
% of non-F1 starting cohort	100%	39%	29%	18%	8%	5%
% from F1 previous step		72%	64%	75%	37%	77%
% from non-F1 previous step		39%	74%	63%	42%	71%

When the 2011-12 cohort is tracked for two years, the F1 student completion increases by 40 students (from 10% to 24%) and the non-F1 student completion increases by 22 students (from 5% to 11%) (Table 2). The percentage rates of completion from Math 1A-Math 1B-Math 1C more than doubles among F1 and non-F1 students. Note that while the initial Math 1A pass rate gap between F1 and non-F1 students is 33-percentage points, this gap narrows as approximately 75% of both groups of students who attempt Math 1B and Math 1C successfully complete these courses.

Table 2. 2011-12 Math 1A-Math 1B-Math 1C Cohort Tracked for Two Years.

Starting Level	Attempt Math 1A	Pass Math 1A	Attempt Math 1B	Pass Math 1B	Attempt Math 1C	Pass Math 1C
Math 1A F1	276	198	171	130	88	67
Math 1A non-F1	369	144	117	75	59	42
% of F1 starting cohort	100%	72%	62%	47%	32%	24%
% of non-F1 starting cohort	100%	39%	32%	20%	16%	11%
% from F1 previous step		72%	86%	76%	68%	76%
% from non-F1 previous step		39%	81%	64%	79%	71%

Among the 2012-13 cohort, 287 F1 students and 395 non-F1 students enrolled in Math 1A, adding up to a total student enrollment of 682 (Table 3). Within this cohort, 199 (69%) F1 students and 195 (49%) non-F1 students successfully completed the course. These students are tracked to determine their progression through Math 1C in one and two years. Within one year, 42 (15%) F1 students and 26 non-F1 (7%) students successfully completed the Math 1A-Math 1B-Math 1C sequence. When compared to the 2011-12 cohort, more students are attempting and completing the Calculus pathway in one academic year, with a 5% and 2% increase among F1 (10% to 15%) and non-F1 (5% to 7%) students completing Math 1C respectively.

Table 3. 2012-13 Math 1A-Math 1B-Math 1C Cohort Tracked for One Year.

Starting Level	Attempt Math 1A	Pass Math 1A	Attempt Math 1B	Pass Math 1B	Attempt Math 1C	Pass Math 1C
Math 1A F1	287	199	135	109	46	42
Math 1A non-F1	395	195	112	71	43	26
% of F1 starting cohort	100%	69%	47%	38%	16%	15%
% of non-F1 starting cohort	100%	49%	28%	18%	11%	7%
% from F1 previous step		69%	68%	81%	42%	91%
% from non-F1 previous step		49%	57%	63%	61%	61%

When the 2012-13 cohort is tracked for two years, the F1 (42 to 89 students) and non-F1 student (26 to 57 students) completion doubles (Table 4). The percentage rates of completion from Math 1A-Math 1B-Math 1C increases among F1 and non-F1 students (F1: +16%; non-F1: +7%). At least two-thirds or higher of those who attempted Math 1B and Math 1C successfully completed the course, regardless whether they are F1 or non-F1 students.

Table 4. 2012-13 Math 1A-Math 1B-Math 1C Cohort Tracked for Two Years.

Starting Level	Attempt Math 1A	Pass Math 1A	Attempt Math 1B	Pass Math 1B	Attempt Math 1C	Pass Math 1C
Math 1A F1	287	199	169	131	106	89
Math 1A non-F1	395	195	145	91	78	57
% of F1 starting cohort	100%	69%	59%	46%	37%	31%
% of non-F1 starting cohort	100%	49%	37%	23%	20%	14%
% from F1 previous step		69%	85%	78%	81%	84%
% from non-F1 previous step		49%	74%	63%	86%	73%

Among the 2013-14 cohort, 340 F1 students and 466 non-F1 students enrolled in Math 1A, adding up to total enrollment of 806 (Table 5). Within this cohort, 248 (73%) F1 students and 252 (54%) non-F1 students successfully completed the course. These students are tracked to determine their progression through Math 1C in one and two years. Within one year, 46 (14%) F1 students and 30 non-F1 (6%) students successfully completed the Math 1A-Math 1B-Math 1C sequence.

Table 5. 2013-14 Math 1A-Math 1B-Math 1C Cohort Tracked for One Year.

Starting Level	Attempt Math 1A	Pass Math 1A	Attempt Math 1B	Pass Math 1B	Attempt Math 1C	Pass Math 1C
Math 1A F1	340	248	178	131	60	46
Math 1A non-F1	466	252	174	92	43	30
% of F1 starting cohort	100%	73%	52%	39%	18%	14%
% of non-F1 starting cohort	100%	54%	37%	20%	9%	6%
% from F1 previous step		73%	72%	74%	46%	77%
% from non-F1 previous step		54%	69%	53%	47%	70%

When the 2013-14 cohort was tracked for two years, the F1 student completion increases by 59 students (from 14% to 31%) and the non-F1 student completion increases by 44 students (from 6% to 16%) (Table 6). The percentage rates of completion from Math 1A-Math 1B-Math 1C doubles among F1 and non-F1 students between year one and year two.

Table 6. 2013-14 Math 1A-Math 1B-Math 1C Cohort Tracked for Two Years.

Starting Level	Attempt Math 1A	Pass Math 1A	Attempt Math 1B	Pass Math 1B	Attempt Math 1C	Pass Math 1C
Math 1A F1	340	248	222	159	136	105
Math 1A non-F1	466	252	194	106	105	74
% of F1 starting cohort	100%	73%	65%	47%	40%	31%
% of non-F1 starting cohort	100%	54%	42%	23%	23%	16%
% from F1 previous step		73%	90%	72%	86%	77%
% from non-F1 previous step		54%	77%	55%	99%	70%

Among the 2014-15 cohort, 326 F1 students and 461 non-F1 students enrolled in Math 1A, making up a total of 787 students (Table 7). Within this cohort, 218 (67%) F1 students and 237 (51%) non-F1 students successfully completed the course. These students were tracked to determine their progression through Math 1C in one and two years. Within one year, 42 (13%) F1 students and 22 non-F1 (5%) students successfully completed the Math 1A-Math 1B-Math 1C sequence. Compared to the 2011-12 cohort, the percentage rate at each step of the pathway among the 2014-15 cohort remained relatively stable for F1 students and increased slightly for non-F1 students (+5% among Math 1B attempts; +2% among Math 1B completion).

Table 7. 2014-15 Math 1A-Math 1B-Math 1C Cohort Tracked for One Year.

Starting Level	Attempt Math 1A	Pass Math 1A	Attempt Math 1B	Pass Math 1B	Attempt Math 1C	Pass Math 1C
Math 1A F1	326	218	146	110	45	42
Math 1A non-F1	461	237	153	90	33	22
% of F1 starting cohort	100%	67%	45%	34%	14%	13%
% of non-F1 starting cohort	100%	51%	33%	20%	7%	5%
% from F1 previous step		67%	67%	75%	41%	93%
% from non-F1 previous step		51%	65%	59%	37%	67%

Methodology

Students enrolled in Math 1A are identified based on the academic year of enrollment, and four cohorts are established (2011-12, 2012-13, 2013-14, 2014-15). Progression into Math 1B and Math 1C are determined based on those within each cohort who successfully complete Math 1A (any term during the academic year). Progression for the first year is determined from fall term through the summer term and the second year extends into the following summer term.

Note that the second year tracking includes students in the pathway from the first year.

The analysis counts individual students and not the number of grades awarded so enrollment figures will not match up to enrollment counts published elsewhere.

Course success is determined by final grades of “A,” “B,” “C,” and “P” grades.

F1 students were identified based on F1/FZ visa status; non-F1 students includes domestic students and students with a visa status other than F1/FZ.

Source

FHDA IR&P, ODS [Registration Analysis, Open Doors Reports]