

# MATHEMATICS DEPARTMENT

## PROGRAM REVIEW

April 2005

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# MATHEMATICS DEPARTMENT PROGRAM REVIEW

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# MATHEMATICS PROGRAM REVIEW

## *Executive Summary*

The Math Department is staffed both by full-time and adjunct faculty. The full-time equivalent faculty (FTEF) in the non-developmental skills math is currently 2.0 (38.5%) full-time faculty, 3.2 (61.5%) adjunct faculty. Additional support for the Math Department is provided by staffing in the Student Success Center, which handles placement testing, developmental skills math, and math tutoring.

The program experienced its highest FTES production in the history of the program in Fall 2003 when it generated 137.78 FTES—driven in part by an extremely successful January Intersession. During that semester, the program was ranked as the second highest at the college in credit FTES, second only to the ESL Program. Math was the third highest in credit FTES in Spring 2004. The Math Department represented a 6.4% share of all credit FTES at the college that semester, compared to the 4.9% share it held in Spring 2000, an increase of almost 31%.

Fall 2003 classes had an average class enrollment of 40 students at census. Contributing to the strong average class size is the fact that over 54% of all math enrollments are in distance learning classes, the largest of which are the Math 030 Intermediate Algebra and Math 160 Introduction to Statistics. Since the last Program Review, enrollment in these courses has varied from 75 to over 200. More and more classes have been offered in or converted to the online format, with substantial increases in enrollment each time.

Based on research that shows that students learn best in a “blended learning” environment, combining online and in-class instruction, the Math Department is continuing to expand options in this modality. In Fall 2005, five new classes will be converted to this hybrid format.

Although survey data shows that math students are highly satisfied with the quality of instruction and overall program quality, attrition in math classes tends to be higher than the college average (24.1% in Fall 2004 compared to 16.5% for all college credit classes). It is hoped that the new hybrid format along with modifying instruction in the Intermediate Algebra online course will increase retention for the department in the future.

Recommendations and goals include:

- Continue work on identifying, measuring, tracking, and improving student learning outcomes
- Update all course outlines to include expected student learning outcomes
- Allocate a sufficient number of classrooms for math hybrid courses with Internet access, ceiling-mounted projectors, and speakers for sound
- Bring adjunct faculty evaluations up-to-date by Fall 2006
- Replace Department Chair’s five-year-old laptop computer
- Research ways to increase effectiveness of online math courses with 100+ enrollment or consider splitting them into two sections
- Increase faculty workspace and computer/Internet access within the Distance Learning Department

# MATHEMATICS PROGRAM REVIEW

## ***Program Review Process***

The Math Department Chair met with Coastline's Instructional Researcher in the Fall 2004 semester to discuss the Program Review process, select the Math Department committee faculty members, design surveys and lay out a time line. Volunteering to work on the project were full-time faculty members Fred Feldon, Math Department Chair, and Lisa Lee, also in the Math Department; Gayle Noble, Instructor/Coordinator for the Student Success Center; Keven Rewers, part-time staff member in the Garden Grove Center Info Commons; and full-time Librarian, Cheryl Stewart.

The decision was made to survey all Math students and faculty. Surveys were designed and written at the end of Fall 2004 semester and distributed during Fall 2004 and the January Intersession in 2005. Surveys went to 14 Math Faculty and over 1,000 Math students. The Math Department Chair was in communication with the Instructional Researcher and other team members during the Fall 2004 and Spring 2005 semesters and met with the Instructional Researcher during the Spring 2005 semester to review survey results and strategize and write this report.

## ***Descriptive Background***

### **Overview**

Before the current Math Department Chair was hired at the college, the Math Department was run at various times by either an instructional administrator (Discipline Dean or Vice President of Instruction) or, for a short period, by a department chair who did not receive tenure and left the college. Current Math Department Chair Fred Feldon was hired in September, 1995, and received tenure in 1999. A second full-time math faculty member, Lisa Lee, was hired in 2001. Lisa will complete her fourth year of teaching Spring 2005 and is applying for tenure.

The Math Department currently includes (1) the Student Success Center which offers math placement testing, tutoring, and computerized preparatory courses for students wishing to review or refresh their math skills; (2) non-transferable, degree-applicable general education courses including basic math, pre-algebra, beginning algebra, and intermediate algebra; and (3) transfer-level courses including quantitative reasoning, math for elementary teachers courses, college algebra, trigonometry, finite math, business calculus, introduction to statistics, and the first two semesters of calculus.

Like most departments in the college, the Math Department has a largely non-traditional student population consisting mostly of returning adults with family and work obligations. The department offers a wide variety of classes for these students including daytime site-based courses, evening courses, weekend college courses, self-paced courses with flexible start-dates, online courses, Cable TV courses, and hybrids. The Math Department has standardized on a state-of-the-art online program, free to students, called *MyMathLab* (from Pearson Education) which is used for both distance learning classes and as supplemental material for all other courses.

## **Student Success Center**

Student's experiences in the SSC vary by their level of math ability. Students with the lowest level of ability are generally the best served. They seem to greatly enjoy the PassKey software, and any questions they have are easily answered by the SSC full-time aide, who has a BA degree in math. Students experiencing problems at higher math course levels are not "seamlessly" served by the SSC. When they call for assistance or for information about tutoring, our staff generally first question them about their course and instructor. As often as not, confused telecourse or Internet math students have not adequately read their course syllabus and are simply not aware of how their course works. They can be helped with the "process" (vs. the content) of their course over the telephone. Sometimes they are relieved just to know that they can e-mail or call their instructor.

Sometimes students from higher-level math courses come into the SSC or call for help at times when no one is available to help them. The SSC staff will check if any math faculty are available in distance learning; quite often they are not. Students are told that they must wait for tutoring hours or to try to contact their instructor. This is often not a satisfactory answer for students, who want to be helped immediately.

"MyMathLab" students generally work independently at the designated SSC machines, seldom asking for assistance. They sometimes come during tutoring hours and ask the tutor for help with specific problems; they boot up the program, and have the tutor sit with them in front of the SSC machine with the plug-in. This seems to work well.

Capability and personality characteristics of math tutors can be an issue for students coming for tutoring. Students form opinions about which of two math tutors (who cover two separate nights) is their favorite, and if assigned nights are switched (at tutor's request, due to jury duty, or final exams, etc.), surprised students can get cranky. While diversity in tutors is prized (bilingual ability, etc.) among the staff, students sometimes complain if tutors with accents are hard to understand.

## **General**

Between now and the last Program Review, the two major issues facing the Math Department were (1) Student Learning Outcomes (SLOs) and (2) changing the Math graduation requirements. A small number of math course outlines have recently been re-written and now include SLOs, but a major focus for the department will be to agree on course-specific and department-wide outcomes and develop an assessment cycle.

Regarding a change in graduation requirements, the statewide Academic Senate in 2004 intensified this debate for Math and English. The Math Department Chair discussed this with Coastline faculty, who subsequently voted to increase the requirement from Beginning Algebra to Intermediate Algebra, provided we can use a locally-developed course, with the same content and level of rigor, but with an approach that emphasizes real life applications, technology, and mathematical modeling. The intent is not to add an additional barrier to students. Instead, the department sees this as an opportunity to take a step in the right direction, to fill the need for an educated citizenry, ensuring that students have the quantitative and technological skills needed to function successfully in business and industry and in a democratic society.

Such an approach was taken in developing the new Math 100 course, with very favorable results.

### **Student comments about Math 100:**

"With me, math had a bad rap because it was always presented in a 'don't ask why, just learn it and shut up' fashion. I felt that way too, until this class [Math 100]. It is the only math class I've actually looked forward to. The applicability of this course is awesome! It's like the book was written for me! This may well be one of the best courses I have taken to date." -- Robert M., Intersession 2003

"I am a bone marrow transplant coordinator and I use math daily. But I have a completely different view of mathematics now. My eyes have been opened and information processing will become second nature. Math 100 may be ending, but the knowledge and understanding of reality and of mathematics has left an indelible mark in my thought processes." -- Colette M., Fall 2003

"I feel this class [Math 100] should be a requirement for all students to take in College." -- Shannon L., Fall 2002

In Fall 2004, a few problems occurred in the Math Department. In Math 030 the Instructor, Henri Feiner, with the Department Chair's approval, experimented with free-response online Midterm and Final Examinations. Because of the unique math notation, the high volume of data transferred, and the length of time required to maintain an Internet connection (3-4 hours), many students had a horrible experience. Several exams were submitted then lost. The instructor also assigned a large amount of online homework, far more voluminous than most students thought was fair. In Math 100, a new edition of the textbook and a new version of the MathXL online homework was released, too soon, we felt. Some exercises had errors and used interactive explanations and formulas that either didn't match or weren't found in the book. Students were understandably and justifiably frustrated. The reaction to these problems was reflected in comments in the Program Review Survey. We have since modified our instruction in Math 030, and the homework situation has improved in Math 100 thanks to the efforts of the publisher. This, we feel, is part of the challenge of trying new ideas and experimenting with ways to increase student learning, success, and retention. We had some problems, and we've addressed them.

Since 2000 many changes have taken place in the Math Department, including implementation of recommendations and goals made in the last Program Review Report, dated May, 2000:

- Addition of full-time faculty member, Lisa Lee
- Further hiring of adjunct instructors with Master's Degrees in Math and favorable teaching evaluations
- Establishment of an online version of Math 100, Quantitative Reasoning, which now enrolls 40-60 students six times per year!
- Implementation of Coastline's original, computerized Math Placement Test, created by Math Department Chair, Fred Feldon, with assistance from Dr. Jerry Rudmann, Supervisor of Research, and approved by the State Chancellor's Office in 2002
- Offering self-paced math courses with flexible-start dates including Basic Math, Beginning Algebra, and Intermediate Algebra; then updating and revamping those courses to turn them into 50/50 and 40/60 traditional/online hybrid courses and

adding Pre-Algebra beginning in Fall 2005, to increase the program from three to four courses

- Providing graphing calculators for loan to students, including forty TI-83 Plus calculators purchased in 2003 and an additional eighty TI-84 Plus calculators with new overhead viewers, a video interface, and emulation software purchased in 2005
- Continuing the Math Tutoring program in the Student Success Center, with support from Margaret Hickey and Gayle Noble

Another important recommendation in the last Program Review Report was to continue support for computer-based classes. This was met by the following:

- Developing a series of instructional videos on how to use the graphing calculator (created by Math Department Chair Fred Feldon and new faculty member Lisa Lee)
- Incorporating online homework into Distance Learning courses including Introduction to Statistics, Intermediate Algebra, Quantitative Reasoning, and College Algebra
- Establishing *MyMathLab* as the department standard for online material and a course management system
- Using the free software programs *Winplot* and *Winstats* for students in Math 140 Business Calculus; plans call for expanded usage to other courses in the Fall of 2005, and creating instructional videos on how to use those programs
- Offering two new Internet-based math courses for Spring, 2005: Finite Math and College Algebra, resulting in a 67% increase in enrollments in comparison to previous semesters
- Offering three new Internet-based math courses for the TEACH3 program, Math for Elementary Teachers 1, 2, and 3, all of which had enrollments ranging from 25 to 45 students every semester

Other changes that were made resulting in increased enrollment include:

- Expanding the Cable TV mode of instruction Phil Dietrich uses in his popular Beginning Algebra course to include Intermediate Algebra
- Creating a new *Coastline Minute* featuring Math Department Chair, Fred Feldon, currently airing on Cable TV to promote the Math Department
- Offering a new section of Intermediate Algebra beginning Fall 2005 that will emphasize real world applications and mathematical modeling, similar to the new Math 100 course

The Math Department also continues to work with various groups and programs within the College, including the following:

- Increasing the number of math courses offered to students in the Army, Navy, and PACE programs, including Phil's Intermediate Algebra, Fred's Quantitative Reasoning, Lisa's Introduction to Statistics, and George Behr's College Algebra
- Partnering with the Bill and Melinda Gates Foundation and the Newport Mesa Unified School District to propose an Early College High School
- Participating in the creation of an Informatics Program that transfers to UCI and includes two new math courses created by adjuncts Andy Wagner and Joseph Ninh
- Partnering with the Huntington Beach Unified School District to deliver math courses in the Coastline ACCESS program
- Summer semester math course offerings for high school students continue to be a success, enrolling approximately 200 students every summer

## ***Quantitative Data***

### **Course Elements**

Enrollments in the Math Department have continued to increase, both in number of seats and as a percentage of the college. From Spring 2000 to Spring 2004, for example, Math Department FTES (not including developmental skills math) went from 75.11 to 104.97, a 28.4% increase. In that time period, the Math Department moved up in department ranking based on credit FTES production from fifth to third overall in the college. In Fall 2003, due largely to a successful Intersession enrollment, Math Department FTES reaching an astonishing 135.21, second overall in the college! Part of this may be attributed to a declining enrollment in Business Computing and Computer Science, but the climb in Math Department FTES is impressive (see charts on following pages).

FTES in developmental skills math classes offered through the Student Success Center have fluctuated over the past six years, generating 3.45 FTES in the 1998-99 regular terms, reaching a peak of 6.23 FTES in 2002-03, and dropping to 4.28 FTES for 2003-04. Enrollment in Math 004 and Math 080 classes varies between 10-20 students per semester. Math placement testing peaks at certain points in the semester. The number of students seeking math tutoring has grown, but varies during the semester with no apparent pattern, from 1-2 students per day up to 10-15 per day. Based on anecdotal feedback from Gayle Noble, the ability and quality of individual tutors may affect attendance. If one tutor is "better" than another, that tutor will attract more students on the day they are scheduled. Also, if one instructor implements an online test, say, or a project in their course, that may impact attendance in the SSC. Additionally, there's a "learning curve" when teaching online, and some instructors may be more effective at communicating with students, anticipating problems, and offering support than others. So that may cause attendance to vary.

Overall, the Math Department feels that continuing to offer math tutoring at least two times a week in the SSC from 3-8 p.m. is essential and should continue. A list of all math faculty using *MyMathLab* should be available, along with office hours and locations, e-mail and phone numbers, and students as well as SSC Staff should be encouraged to contact any one of us at any time with a question or concern. We are extremely appreciative of the support we get from the SSC, and we will work together with them and help in any way we can to continue to offer this vital service to our students.

Distance learning has had a significant impact on degree and transfer-level math course enrollments and resulting FTES for many years. In most terms over the past six years, distance learning math courses have generated between 50-65% of the program's FTES.

Seat count in all math classes (including developmental skills classes) grew from 690 in Spring 1999 to 965 in Spring 2004, a 39.9% increase. As a percentage of the college, seat count for those semesters went from 4.0% to 5.9%, a 47.5% increase.

The following pages show enrollments and FTES for the Math Department (including Developmental Skills, Math (excluding Developmental Skills), and Developmental Skills Math. The final chart shows FTES by delivery mode.



## MATHEMATICS (including Developmental Skills) Six-Year Summary of Enrollments and FTES

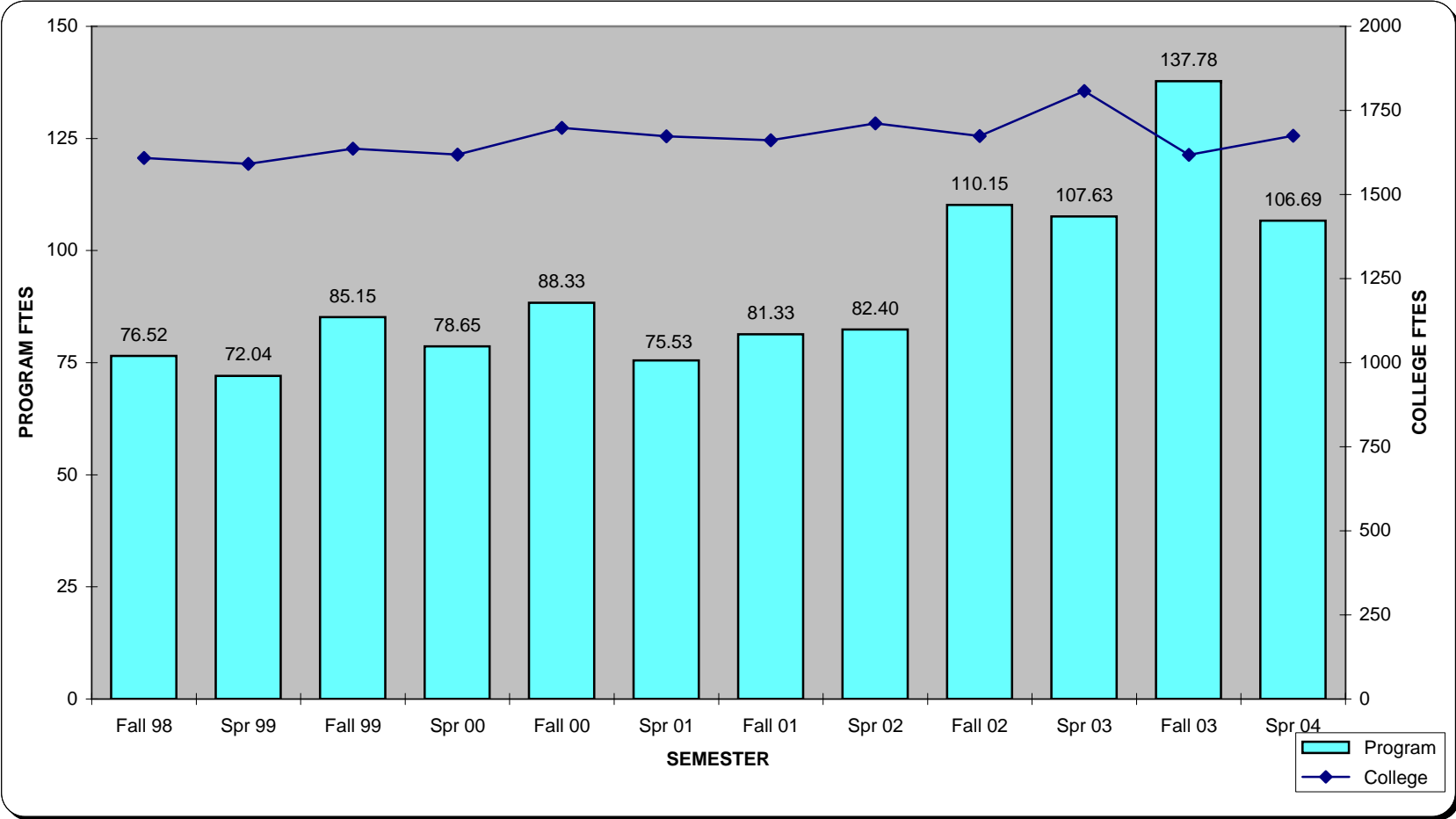
PROGRAM AND COLLEGE DATA	1998-99		1999-00		2000-01		2001-02		2002-03		2003-04	
	FALL 982	SPRING 983	FALL 992	SPRING 993	FALL 002	SPRING 003	FALL 012	SPRING 013	FALL 022	SPRING 023	FALL 032	SPRING 033
<b>FTES</b>												
Program	76.52	72.04	85.15	78.65	88.33	75.53	81.33	82.40	110.15	107.63	137.78	106.69
College	1608.48	1591.14	1636.13	1618.98	1698.32	1673.35	1661.61	1711.58	1673.54	1807.53	1617.96	1674.51
Program as % of College	4.8%	4.5%	5.2%	4.9%	5.2%	4.5%	4.9%	4.8%	6.6%	6.0%	8.5%	6.4%
<b>Program Sections</b>												
Total Sections Scheduled	19	23	23	24	38	40	52	44	46	35	33	32
Sections Cancelled	2	2	1	3	4	2	11	9	7	7	2	4
Sections (adjusted for concurrent/canc./work exp.)	14	18	19	18	31	35	41	35	39	28	31	28
Avg. Enroll. All Classes	49	38	40	38	26	20	18	21	26	36	40	34
<b>Seat Count at Census</b>												
Program	680	676	755	690	817	684	752	737	996	1008	1233	965
College	17,860	17,585	17,816	17,444	17,491	16,858	15,944	16,213	16,043	17,053	15,500	16,243
Program as % of College	3.8%	3.8%	4.2%	4.0%	4.7%	4.1%	4.7%	4.5%	6.2%	5.9%	8.0%	5.9%
<b>Seat Count at Semester End</b>												
Program	457	473	540	438	588	493	545	507	800	697	911	688
College	14,803	14,684	14,699	14,334	14,336	14,582	13,326	13,405	13,193	13,895	12,673	12,998
Program as % of College	3.1%	3.2%	3.7%	3.1%	4.1%	3.4%	4.1%	3.8%	6.1%	5.0%	7.2%	5.3%
<b>Attrition (Cens. to End Seats)</b>												
Program	32.8%	30.0%	28.5%	36.5%	28.0%	27.9%	27.5%	31.2%	19.7%	30.9%	26.1%	28.7%
College	17.1%	16.5%	17.5%	17.8%	18.0%	13.5%	16.4%	17.3%	17.8%	18.5%	18.2%	20.0%

*Source: ADATERM reports*

# MATHEMATICS (including Developmental Skills)

## Six-Year Summary of Enrollments and FTES

FTES	Fall 98	Spr 99	Fall 99	Spr 00	Fall 00	Spr 01	Fall 01	Spr 02	Fall 02	Spr 03	Fall 03	Spr 04
Program	76.52	72.04	85.15	78.65	88.33	75.53	81.33	82.40	110.15	107.63	137.78	106.69
College	1608.48	1591.14	1636.13	1618.98	1698.32	1673.35	1661.61	1711.58	1673.54	1807.53	1617.96	1674.51
% of College	4.8%	4.5%	5.2%	4.9%	5.2%	4.5%	4.9%	4.8%	6.6%	6.0%	8.5%	6.4%



## MATHEMATICS (not including Developmental Skills)

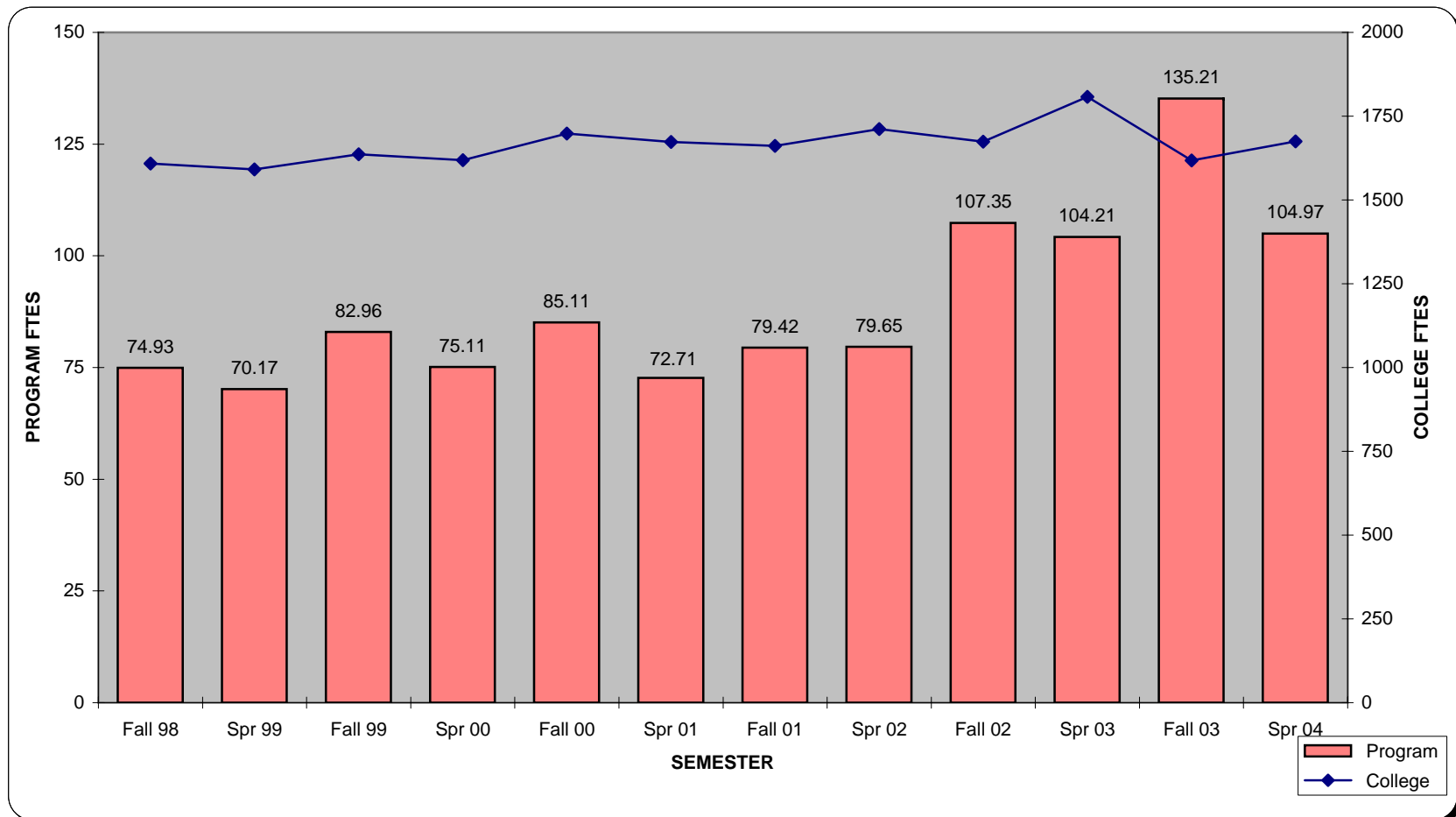
### Six-Year Summary of Enrollments and FTES

PROGRAM AND COLLEGE DATA	1998-99		1999-00		2000-01		2001-02		2002-03		2003-04	
	FALL 982	SPRING 983	FALL 992	SPRING 993	FALL 002	SPRING 003	FALL 012	SPRING 013	FALL 022	SPRING 023	FALL 032	SPRING 033
<b>FTES</b>												
Program	74.93	70.17	82.96	75.11	85.11	72.71	79.42	79.65	107.35	104.21	135.21	104.97
College	1608.48	1591.14	1636.13	1618.98	1698.32	1673.35	1661.61	1711.58	1673.54	1807.53	1617.96	1674.51
Program as % of College	4.7%	4.4%	5.1%	4.6%	5.0%	4.3%	4.8%	4.7%	6.4%	5.8%	8.4%	6.3%
<b>Program Sections</b>												
Total Sections Scheduled	17	20	20	22	24	27	34	25	34	24	28	28
Sections Cancelled	2	2	1	3	3	0	8	2	7	4	1	4
Sections (adjusted for concurrent/canc./work exp.)	12	15	16	16	18	24	26	23	27	20	27	24
Avg. Enroll. All Classes	52	41	45	41	40	26	26	29	33	47	43	38
<b>Seat Count at Census</b>												
Program	629	618	715	649	715	614	665	663	902	931	1162	902
College	17,860	17,585	17,816	17,444	17,491	16,858	15,944	16,213	16,043	17,053	15,500	16,243
Program as % of College	3.5%	3.5%	4.0%	3.7%	4.1%	3.6%	4.2%	4.1%	5.6%	5.5%	7.5%	5.6%
<b>Seat Count at Semester End</b>												
Program	421	424	504	405	509	443	471	447	688	639	846	645
College	14,803	14,684	14,699	14,334	14,336	14,582	13,326	13,405	13,193	13,895	12,673	12,998
Program as % of College	2.8%	2.9%	3.4%	2.8%	3.6%	3.0%	3.5%	3.3%	5.2%	4.6%	6.7%	5.0%
<b>Attrition (Cens. to End Seats)</b>												
Program	33.1%	31.4%	29.5%	37.6%	28.8%	27.9%	29.2%	32.6%	23.7%	31.4%	27.2%	28.5%
College	17.1%	16.5%	17.5%	17.8%	18.0%	13.5%	16.4%	17.3%	17.8%	18.5%	18.2%	20.0%

*Source: ADATERM reports*

## MATHEMATICS (not including Developmental Skills) Six-Year Summary of Enrollments and FTES

FTES	Fall 98	Spr 99	Fall 99	Spr 00	Fall 00	Spr 01	Fall 01	Spr 02	Fall 02	Spr 03	Fall 03	Spr 04
Program	74.93	70.17	82.96	75.11	85.11	72.71	79.42	79.65	107.35	104.21	135.21	104.97
College	1608.48	1591.14	1636.13	1618.98	1698.32	1673.35	1661.61	1711.58	1673.54	1807.53	1617.96	1674.51
% of College	4.7%	4.4%	5.1%	4.6%	5.0%	4.3%	4.8%	4.7%	6.4%	5.8%	8.4%	6.3%



## DEVELOPMENTAL SKILLS: MATH

### Six-Year Summary of Enrollments and FTES

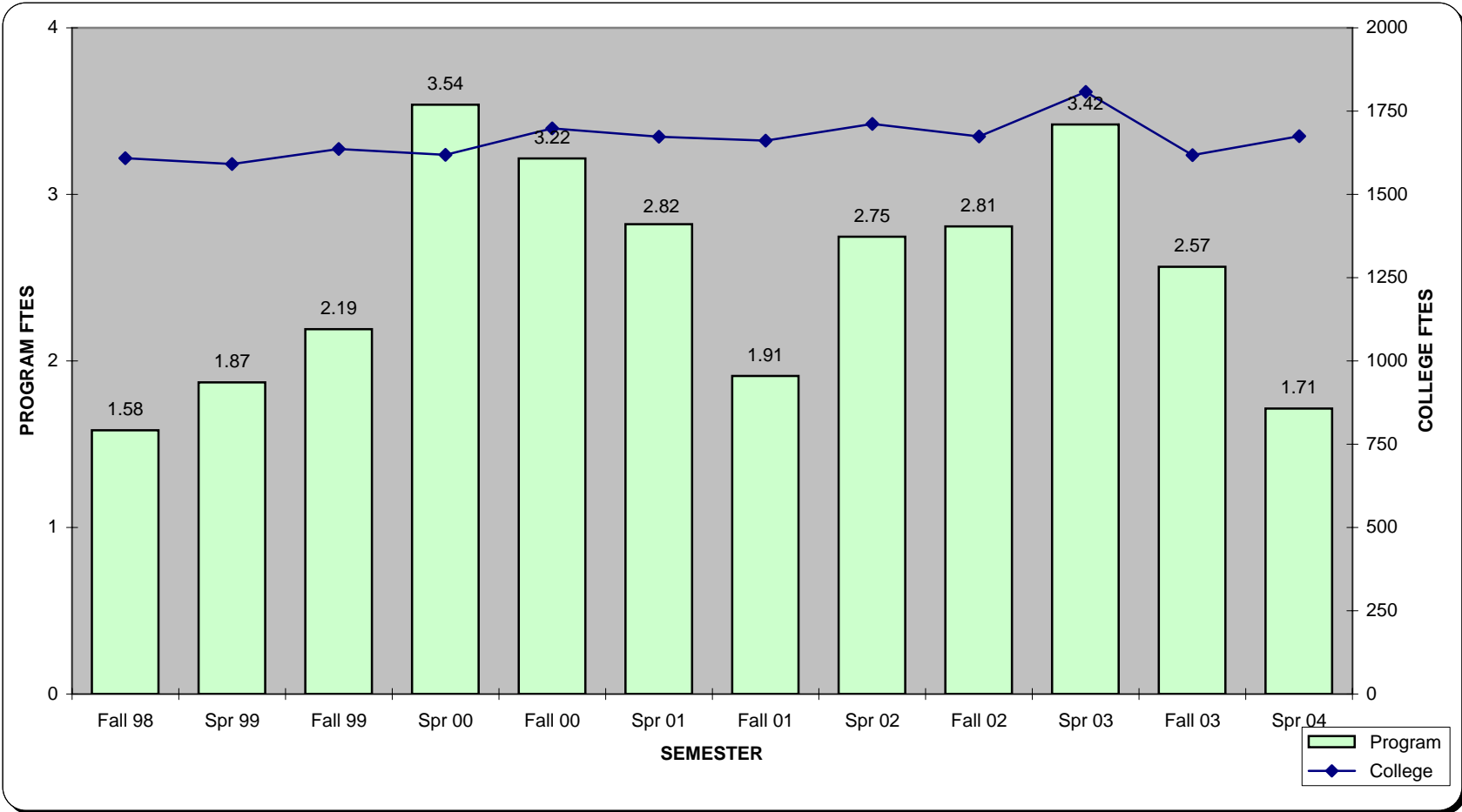
PROGRAM AND COLLEGE DATA	1998-99		1999-00		2000-01		2001-02		2002-03		2003-04	
	FALL 982	SPRING 983	FALL 992	SPRING 993	FALL 002	SPRING 003	FALL 012	SPRING 013	FALL 022	SPRING 023	FALL 032	SPRING 033
<b>FTES</b>												
Program	1.58	1.87	2.19	3.54	3.22	2.82	1.91	2.75	2.81	3.42	2.57	1.71
College	1608.48	1591.14	1636.13	1618.98	1698.32	1673.35	1661.61	1711.58	1673.54	1807.53	1617.96	1674.51
Program as % of College	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.1%	0.2%	0.2%	0.2%	0.2%	0.1%
<b>Program Sections</b>												
Total Sections Scheduled	2	3	3	2	14	13	18	19	12	11	5	4
Sections Cancelled	0	0	0	0	1	2	3	7	0	3	1	0
Sections (adjusted for concurrent/canc./work exp.)	2	3	3	2	13	11	15	12	12	8	4	4
Avg. Enroll. All Classes	26	19	13	21	8	6	6	6	8	10	18	16
<b>Seat Count at Census</b>												
Program	51	58	40	41	102	70	87	74	94	77	71	63
College	17,860	17,585	17,816	17,444	17,491	16,858	15,944	16,213	16,043	17,053	15,500	16,243
Program as % of College	0.3%	0.3%	0.2%	0.2%	0.6%	0.4%	0.5%	0.5%	0.6%	0.5%	0.5%	0.4%
<b>Seat Count at Semester End</b>												
Program	36	49	36	33	79	50	74	60	112	58	65	43
College	14,803	14,684	14,699	14,334	14,336	14,582	13,326	13,405	13,193	13,895	12,673	12,998
Program as % of College	0.2%	0.3%	0.2%	0.2%	0.6%	0.3%	0.6%	0.4%	0.8%	0.4%	0.5%	0.3%
<b>Attrition (Cens. to End Seats)</b>												
Program	29.4%	15.5%	10.0%	19.5%	22.5%	28.6%	14.9%	18.9%	0.0%	24.7%	8.5%	31.7%
College	17.1%	16.5%	17.5%	17.8%	18.0%	13.5%	16.4%	17.3%	17.8%	18.5%	18.2%	20.0%

*Source: ADATERM reports*

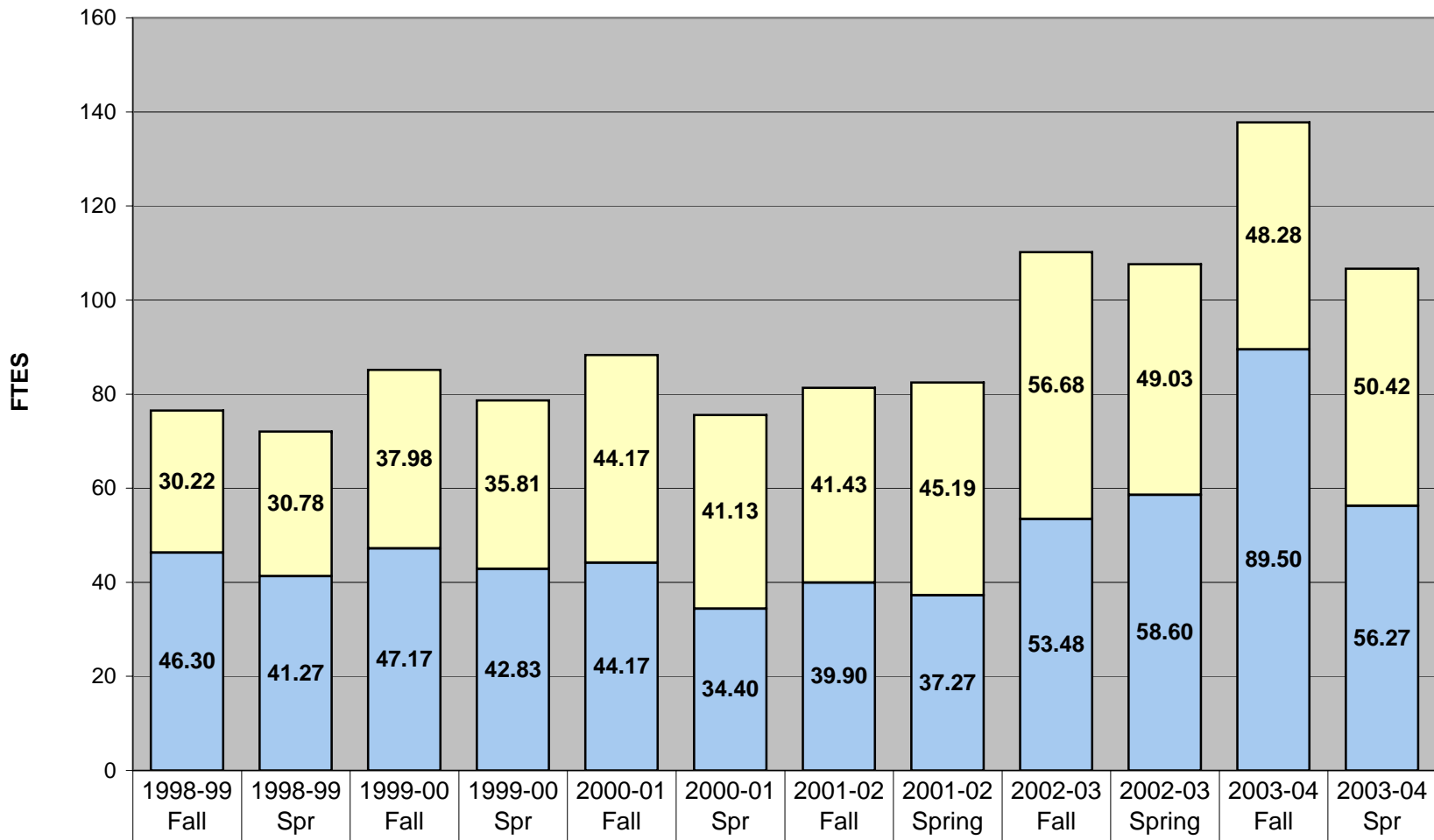
## DEVELOPMENTAL SKILLS: MATH

### Six-Year Summary of Enrollments and FTES

FTES	Fall 98	Spr 99	Fall 99	Spr 00	Fall 00	Spr 01	Fall 01	Spr 02	Fall 02	Spr 03	Fall 03	Spr 04
Program	1.58	1.87	2.19	3.54	3.22	2.82	1.91	2.75	2.81	3.42	2.57	1.71
College	1608.48	1591.14	1636.13	1618.98	1698.32	1673.35	1661.61	1711.58	1673.54	1807.53	1617.96	1674.51
% of College	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.1%	0.2%	0.2%	0.2%	0.2%	0.1%



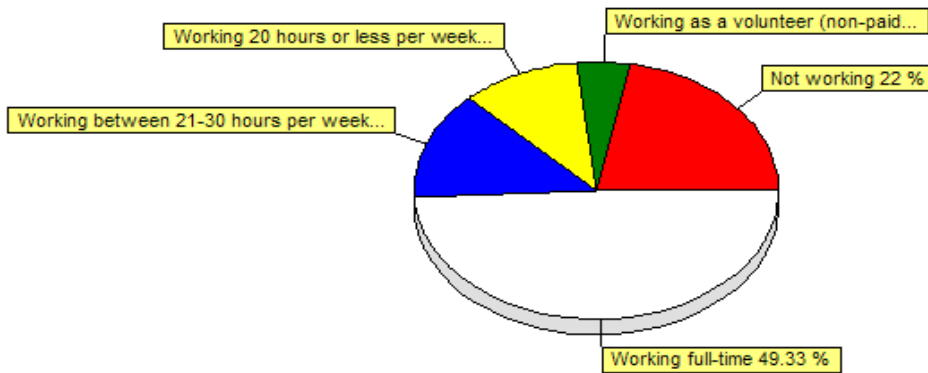
## Math FTES by Delivery Mode



■ Site-Based	30.22	30.78	37.98	35.81	44.17	41.13	41.43	45.19	56.68	49.03	48.28	50.42
■ Distance Learning	46.30	41.27	47.17	42.83	44.17	34.40	39.90	37.27	53.48	58.60	89.50	56.27

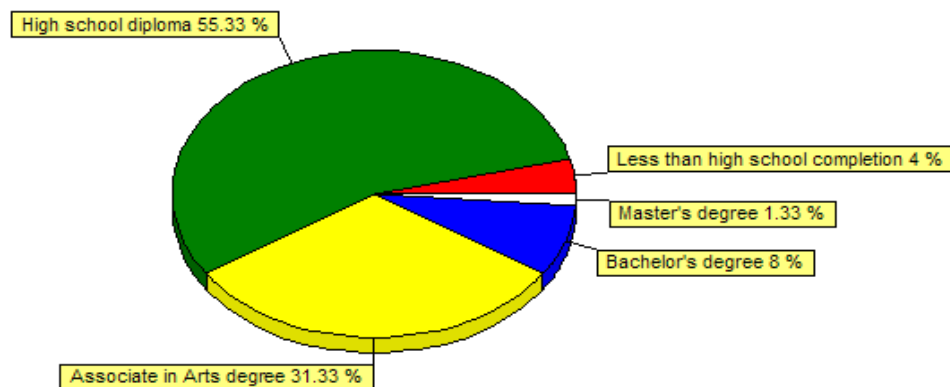
## Student Elements

As might be expected among a student population where the traditional college-age 18-22 year-old students are in the minority, almost 75% of math students are working either part or full-time. Only 22% are not working outside the home.



**Figure 1 Student Employment Status**

More than 55% of the students responding to the survey indicated that their highest level of education was a high school diploma. Thirty-one percent have an Associate in Arts degree, and 9% have a bachelor's degree or higher.

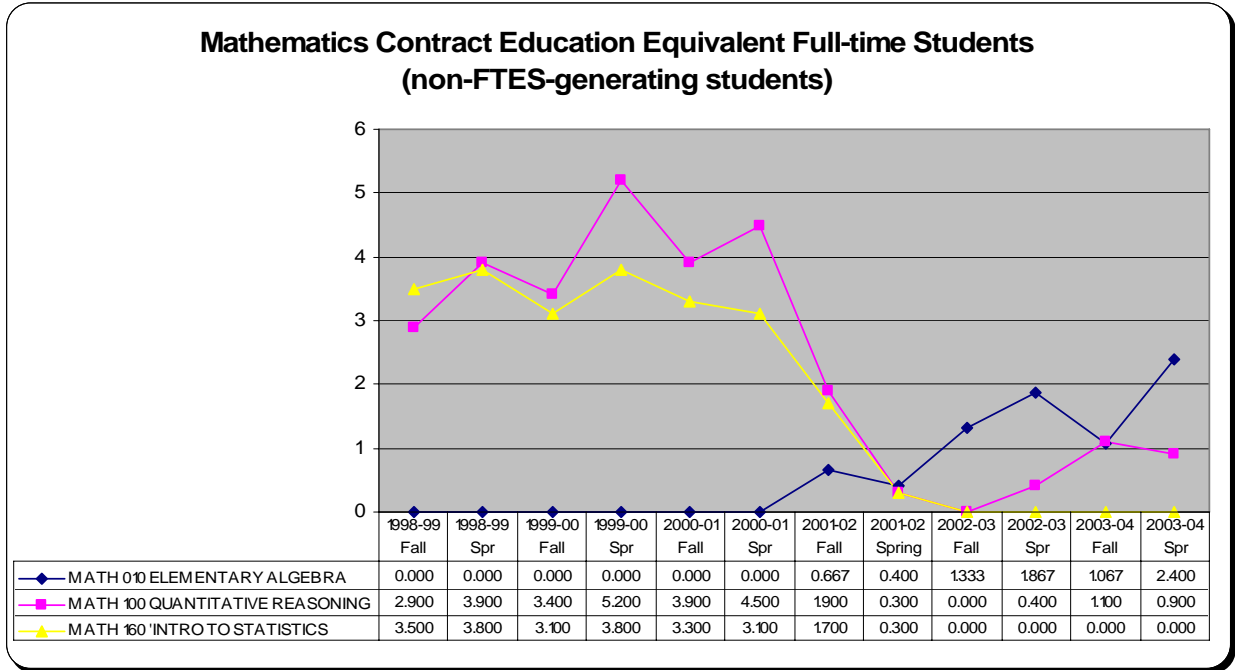


**Figure 2 Highest Level of Education Completed**

Enrollment of contract education/military students in math courses reached a peak in Spring 2000, with enrollments equivalent to 9 full-time students. After a decline in Spring 2002,



enrollments again started to rise. By Spring 2004, military students in math courses represented the equivalent of 3.3 full-time students.



Additional student demographic information is provided under Qualitative Question 7 related to Diversity.

### Cost Elements

The Math Department is staffed both by full-time and adjunct faculty. The full-time equivalent faculty (FTEF) in the non-developmental skills math is currently 2.0 (38.5%) full-time faculty, 3.2 (61.5%) adjunct faculty. (The Math Department is grateful to have been able to hire a second full-time faculty member in 2001!) Additional support for the Math Department is provided by staffing in the Student Success Center, which handles placement testing, developmental skills math, and math tutoring.

The Math Department has been successful in obtaining block grant funding in 2003 and again in 2005 for the purchase of graphing calculators and now has 120 calculators available for student use.

## Qualitative Questions

### 1. Need

Competency in mathematics is required for all three of Coastline's degree options: Option I A.A. Degree, Option II CSU Liberal Arts Transfer, or Option III IGETC. Though students can satisfy the math competency for Option I by passing the Math Placement Test or through coursework, students pursuing Option II or Option III must complete at least three units of math coursework.

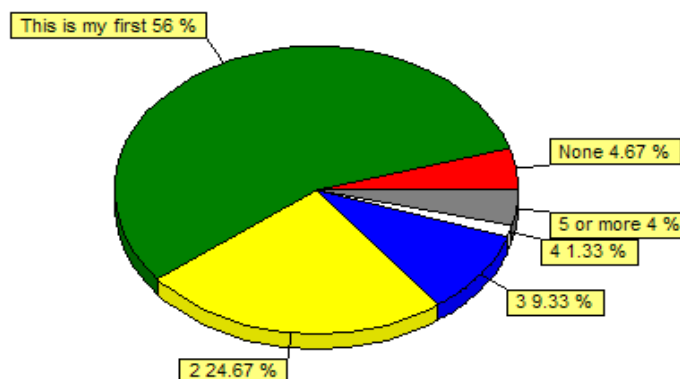
In addition to degree-applicable and transfer-level math courses, the Math Department offers a math tutoring class and a number of developmental level basic math courses to prepare students for degree-applicable courses. Eligibility for degree-applicable math courses is dependent on completion of specified pre-requisite courses or on a qualifying score on the Math Placement Test. Based on Fall 2002 data, approximately 46% of students taking the placement test qualified for transfer-level math; 15% fell four levels below college-level math.

Of 148 students responding to the Math Department's Program Review Student Survey, 104 indicated that they are taking math to satisfy general education requirements for transfer. Another 29 students indicated they are taking math to satisfy A.A. degree requirements without immediate transfer plans.

	Count	Percent
<b>Why are you taking a mathematics course? (Mark all that apply.)</b>		
To satisfy A.A. degree requirements	49	26.49 %
To satisfy general education requirements for transfer	104	56.22 %
To prepare for a new job	7	3.78 %
To improve my skills for my current job	5	2.70 %
To obtain a promotion	2	1.08 %
For personal interest	6	3.24 %
Other	12	6.49 %
<b>Total Responses</b>	<b>185</b>	<b>100 %</b>

Demand for math courses at Coastline has shown a steady increase in recent years, with FTES jumping 69% from 81.33 in Fall 2001 to 137.78 in Fall 2003. Strong enrollments in online math courses during the January intersession have resulted in a record 30.4 FTES for Fall 2003-04 Intersession.

Although more than 60% of students responding to the Program Review survey in Fall 2004 indicated that they had never taken a math course at Coastline before, 39% indicated they have taken two or more math courses at Coastline.



**Figure 3 Number of Math Courses Taken at Coastline**

Although most of Coastline's current vocational certificate programs do not include math requirements, the TEACH3 teacher preparation program does include two Math for Elementary Teachers courses, and Coastline's new Informatics Program in cooperation with UCI will require two math courses: Math 160 Introduction to Statistics and Math 225 Discrete Math for Computer Science.

In addition to assisting students in satisfying degree, transfer, and vocational requirements in math, students are also taking courses for a variety of other reasons—some to satisfy high school math requirements and others to simply be able to assist their children with their math lessons.

## 2. Student Learning Outcomes

The Math Department faces unique challenges in meeting student learning needs based on the widely varying skill levels of students enrolling in math courses. To facilitate success, students must take the Math Placement Test prior to enrolling in math courses. Based on scores, students are referred to the appropriate placement level. Results from Fall 2004 placement test results indicate that 55% of students taking the test do not qualify for enrollment in college-level math (Math 100 or higher).

DISTRIBUTION OF PLACEMENT RESULTS, FALL 2004					
Subject: MATH					
Course Sequence: MATH (SEQ B)					
Number of Placement Records: 414					
COURSE PLACEMENT	PLACEMENT LEVEL	FREQUENCY #	FREQUENCY %	CUMULATIVE FREQ #	CUMULATIVE FREQ %
Math 005 (Beginning Math)	1.	37	9%	37	9%
Math 008 (Pre-Algebra)	2.	23	6%	60	14%
Math 010 (Elementary Algebra)	3.	116	28%	176	43%
Math 030 (Intermediate Algebra)	4.	51	12%	227	55%
Math 100 (Fundamental Concepts) or Ma...	5.	25	6%	252	61%
Math 115,120,140,150,160	6.	74	18%	326	79%
Math 170 (Pre-Calculus)	7.	46	11%	372	90%
Math 180 (Calculus/Analy. Geom. I)	8.	42	10%	414	100%

In addition to placement testing, the Math Department has initiated a number of activities to identify, measure, track, and improve student learning outcomes (SLOs). In Fall 2004, Coastline's Supervisor for Institutional Research and the Instructor/Coordinator for Instructional Research were invited to attend a Math Department meeting to discuss student learning outcomes issues with the department's faculty. The Math Department Chair followed up on that initial meeting by investigating work done at other colleges in identifying desired SLOs in mathematics.

Continuing this work, students and faculty were surveyed in Fall 2004 to determine which learning outcomes they considered most important. By far the outcomes considered most important by students were those related to performing basic consumer-related math functions (99% rating as very important or important) and to using quantitative reasoning skills to make intelligent consumer choices such as selecting a home mortgage or insurance plan (95% very important/important).

**Student comments regarding student learning outcomes:**

I think that understanding mathematics from a historical or humanistic perspective is also very important for a student. That could make the subject more meaningful and develop a better appreciation of it.

Math is a language and in today's computer generated world, it is an essential tool to have a basic understanding of higher-level math.

Of 11 faculty members responding to the faculty survey, 100% rated four outcomes as very important or important: performing basic consumer-type math skills, using basic math in a work setting, developing quantitative reasoning skills for work/career, and solving math problems presented as word problems.

When asked the methods that faculty use to assess student learning outcomes, 100% of the respondents to the faculty survey indicated that they most frequently use objective tests that require calculated problems and short answers. The second most frequently used method of assessment was student participation (64% of faculty). Least frequently used were group projects and case studies (64% saying "not at all").

At present, the program is using a number of indirect measures to evaluate student learning outcomes, including completion rates and grade distribution. Completion and retention rates are noticeably lower in the Math Department than for other departments in the college. Unfortunately, this is consistent with past history and is true not just at Coastline, but for all other colleges throughout the country. Math is unique in its hierarchical structure in that if a student is unsuccessful in one course it has an impact on all future mathematical coursework and learning. In addition, students often put off fulfilling their math requirement until they have completed almost all other course requirements for graduation, which means it may have been many years since their last math class. If you don't use it, you forget it. And waiting until the end to complete their math requirement adds even further emotional pressure. One solution Coastline has implemented is to offer students Math 004

and Math 080 (individualized, computerized, prescriptive assessment programs designed to improve math skills) to prepare them for coursework or the Math Placement Test.

For Fall Semester 2004, grade distribution showed that of 1,294 students were enrolled at census, 507 or 39.1% withdrew from the class they were enrolled in; 787 or 60.8% completed their course. Of those 787, 593 or 75.3% received a grade of Credit/C or better. (See Fall 2004 Grade Distribution report in the appendix.)

### 3. Student Satisfaction

Responses to the Program Review Student Survey indicate that students are highly satisfied with the quality of instruction in math courses, with over 79% indicating “very satisfied” and 17% saying “satisfied.” Fewer than 3% were dissatisfied. Students were also quite satisfied with the variety of classes (87% very satisfied/satisfied), adequacy of instructional facilities (91% very satisfied/satisfied), and the overall quality of the math program (97% very satisfied/satisfied). Most students also reported that they were very satisfied (60%) or satisfied (29%) with their own success in their math classes.

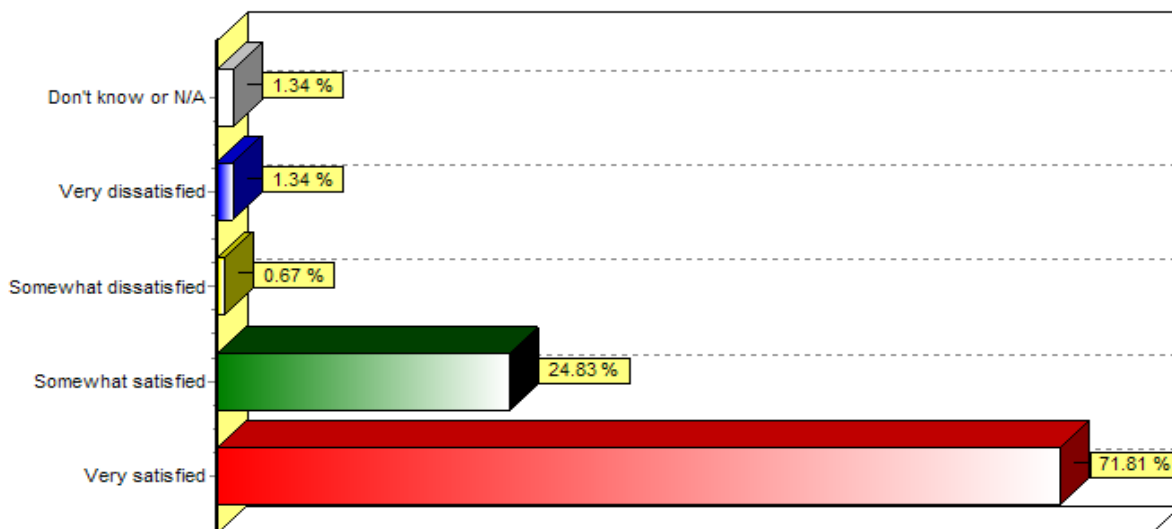


Figure 4 Student Satisfaction wit Overall Program Quality

A few students expressed a desire for more choice in classes, times, and location and noted the difficulty of online math classes. Though instructors were generally satisfied with the variety of classes, suggestions were made to schedule plane geometry, calculus, linear algebra, and pre-calculus.

Student comments about their math classes and the Math Department in general were overwhelmingly positive.

### **Student comments regarding their math classes:**

L. Lee, instructor has been the best online instructor that I've had over the past two years. I've attended classes at University of Phoenix and currently am enrolled at California State University Dominguez Hills BSN program (online). Lisa Lee is outstanding. She is to be commended...she does everything possible so that students succeed in her class.

I took one class that was abysmal...at Fountain Valley High School.... The other two experiences I have had were great. One was a telecourse and the other was an Internet course...the teachers, Mr. Dietrich and Ms. Lee, were both excellent. They were able to make the complex look easy.

I found Math 100 with Feldon to be a very informative class. ...I have learned beneficial information that I will use the rest of my life.... I have been very pleased with this online course and would love to take another class if it were set up and as easily accessible as Math 100. Response time for questions and communication was definitely the key to my success in this course.

Anasa Liu is the best! She is very patient with me. I am not the best at math, and she really explains it well.

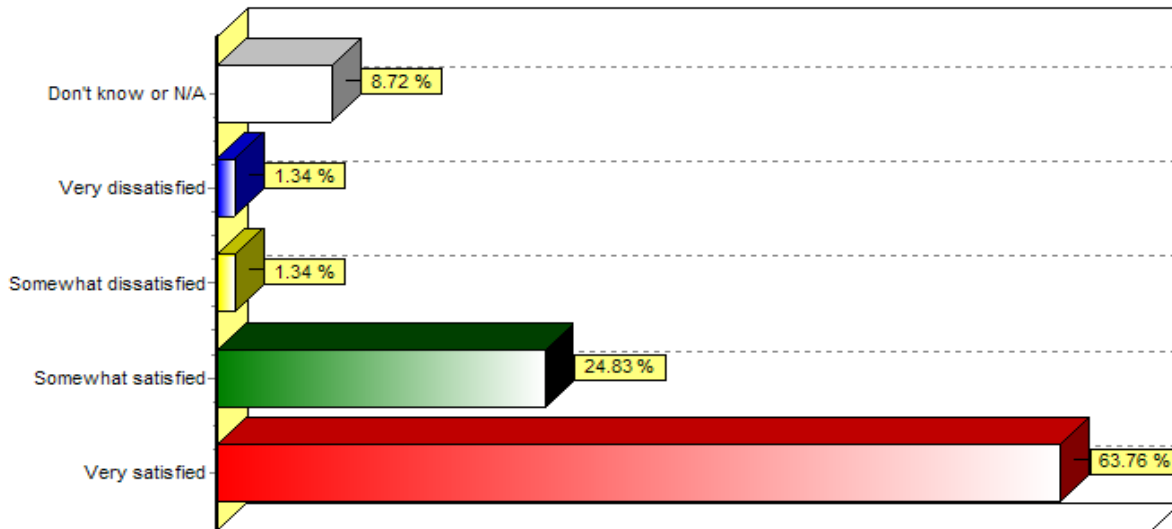
[Mr. Feldon] understands students work or have families. He responds quickly to your questions, and his assignments/homework reflected the objectives. He helps foster that you understand the concept of that particular objective.... This was the first Math class I have ever enjoyed. I was not filled with anxiety.... I would take any Math class as long as Mr. Feldon is the instructor.

You have an excellent math program!

I was astonished at how interactive, responsive, available, encouraging, and helpful Professor Lee is. I have never experienced such an incredibly concerned instructor. I am impressed with the interaction of so many of the students who are in my class. I have commented to my friends and family that this is more interaction than I have seen in any of the "classroom" courses I have taken. I don't think all online courses are this way, but it sure would be great if they were. I'd be willing to take many more classes with Professor Lee.

## **4. Program Resources**

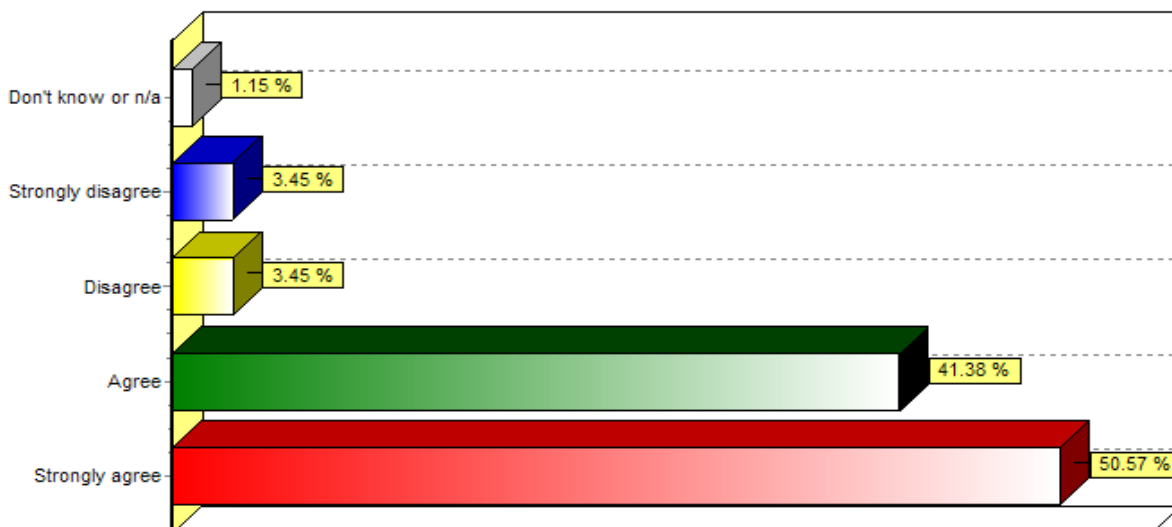
Students in general seem quite satisfied with the facilities, equipment, and technology used by the Math Department as well as with staff support. Fewer than 3% of survey respondents expressed any dissatisfaction with instructional facilities.



**Figure 5 Student Satisfaction with Adequacy of Instructional Facilities**

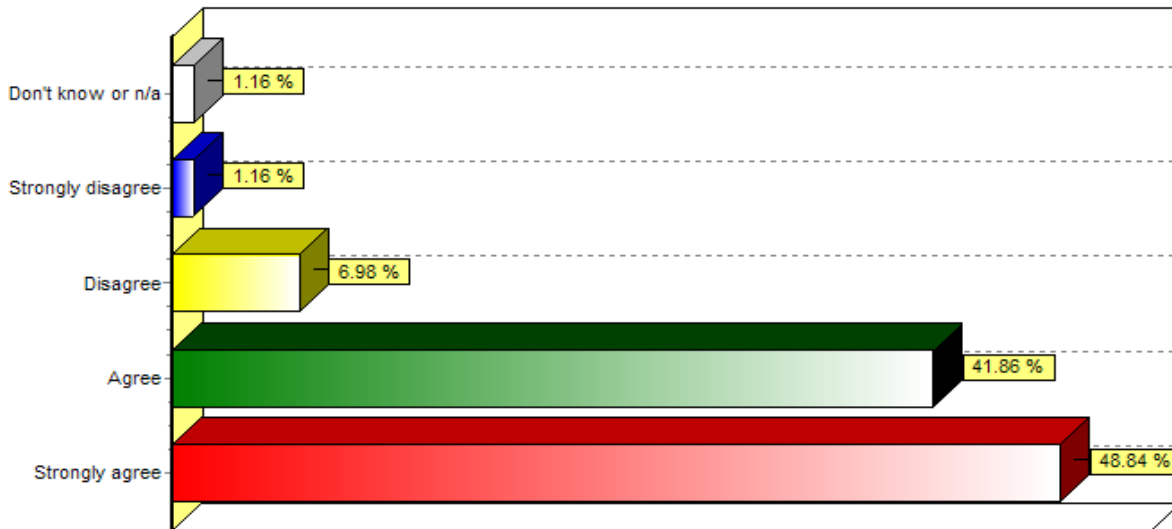
Faculty tended to voice more concerns about instructional facilities than did students. Specifically, some concerns were raised about the adequacy of the computer(s) available for faculty use in the Distance Learning Department, about the multimedia equipment and lack of computer in Room 302 at Garden Grove, inadequate whiteboards in the large and small lecture hall at Garden Grove, and lack of air conditioning, poor whiteboards, and inadequate computers at the Huntington Westminster Center.

Students in distance learning classes were also quite positive about the technology and Web sites used for their classes, though approximately 7% did indicate some problems with the technology



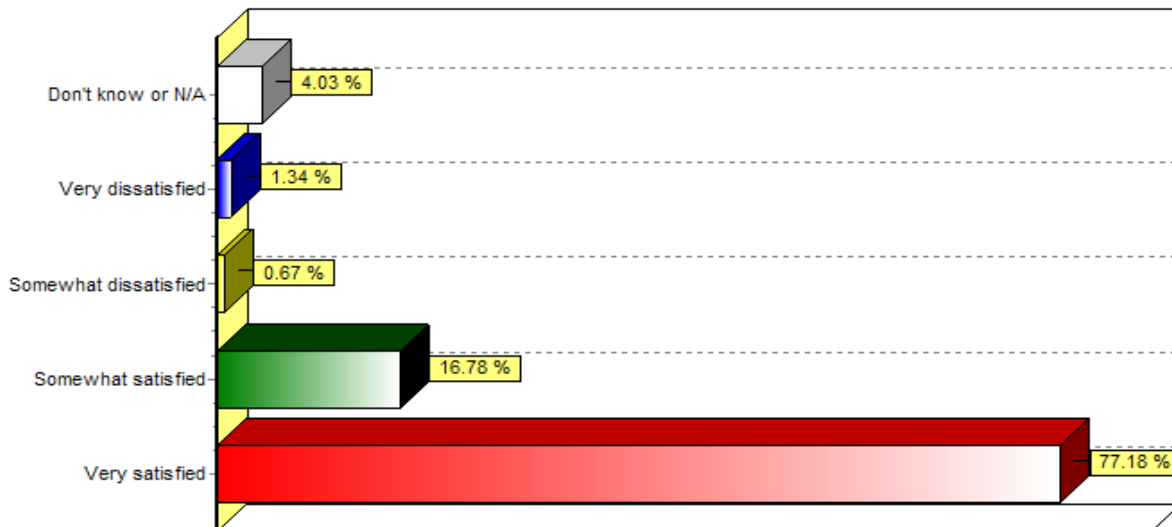
**Figure 6 Student Satisfaction with Reliability of Technology Used to Delivery Distance Learning Course**

Students expressed an almost identical level of satisfaction about the ease of navigation of their MyMathLab or Aleks Website, with about 8% expressing some concerns.



**Figure 7 Student Satisfaction with Ease of Finding Modules on MyMathLab or Aleks Website**

Students also were extremely positive about staff support for the Math Program. Only 2% expressed any level of dissatisfaction.



**Figure 8 Student Satisfaction with Staff Support for the Program**

Although 57% of student survey respondents were taking an online math class, more than 76% indicated that online was their preferred delivery mode. Costa Mesa and Fountain Valley tied as the second-most preferred location or delivery mode.



**Student comments regarding program resources:**

The computer equipment is extremely helpful because I don't have the Internet. There are many different ethnic people here.... I am doing much better than I thought I could possibly do.

I think the math program at Coastline is awesome. I love the ability to complete the homework online, and it is the best math class I've taken thus far!

Positive student responses regarding equipment are not surprising given the efforts of the Math Department Chair in seeking out quality online course materials for the program and in facilitating the acquisition of graphing calculators for student use (including 40 TI-83 Plus and 80 TI-84 Plus calculators).

That the Department Chair has consistently put student needs ahead of his own when advocating for equipment is evident by the fact that one of the primary remaining equipment needs in the program is for a new notebook computer for the Department Chair. The computer he is currently using is approximately five years old and is incapable of running many of the current math software programs.

## **5. Partnerships**

Although the Math Department does not have an advisory committee, the department is involved in a number of community and inter-departmental initiatives within the college. These include a partnership with the Bill and Melinda Gates Foundation and the Newport-Mesa Unified School District to develop an Early High School Program, cooperation with the Huntington Beach Union High School District to deliver math courses in Coastline's ACCESS Program, and the TEACH3 teacher preparation program in which the Math Department offers two benchmark classes that include fieldwork experiences for students. The Math Department will also play an important role in Coastline's new Informatics Program that is being offered in cooperation with the University of California, Irvine, and has developed two new math courses in support of that program.

## **6. Professional Development**

Faculty members in Coastline's Math Department participate in a variety of professional development activities. Based on responses to the faculty survey, 82% of the faculty participate in the college's General Faculty Meeting, and 64% participate in discipline-related and technology-related workshops.

	<b>Count</b>	<b>Percent</b>
<b>In which of the following professional development activities have you participated within the past two years? (Mark all that apply.)</b>		
	Respondents: 11	
CCC General Faculty Meeting	9	81.82 %
Discipline-related workshops	7	63.64 %
Technology-related workshops	7	63.64 %
Other workshops	5	45.45 %
Membership in professional associations	5	45.45 %
Professional conferences	3	27.27 %
Graduate classes/program	5	45.45 %
Other classes	4	36.36 %
Professional training	3	27.27 %
Discipline-related reading	4	36.36 %
Technology-related reading	4	36.36 %
<b>Total Responses</b>	<b>56</b>	<b>100 %</b>

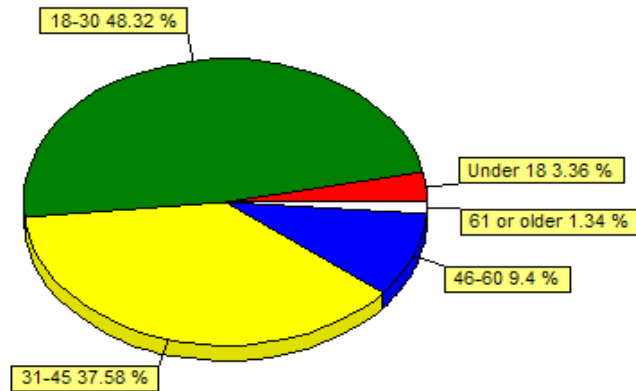
Almost half of the faculty reported that they have memberships in professional associations and/or are taking graduate classes.

- Both full-time faculty members attend every annual California Mathematics Council of Community Colleges (CMC<sup>3</sup>) Conference and every annual American Mathematical Association of Two-Year Colleges (AMATYC) Conference, at considerable personal expense.
- Full-time faculty member Lisa Lee, representing Coastline College, spoke at the AMATYC Conference in Orlando, Florida, in November, 2004, and at the International Conference on Technology in Collegiate Mathematics (ICTCM) in New Orleans, Louisiana, in October, 2004.
- Math Department Chair, Fred Feldon, representing Coastline College, spoke at two CMC<sup>3</sup> Annual Conferences in 2002 and 2005 and is scheduled to speak at the next AMATYC Conference in San Diego, California, in November, 2005.

A needed area of professional development focus for the department is adjunct faculty evaluation, which, due to other demands on the Department Chair's time, have fallen behind schedule.

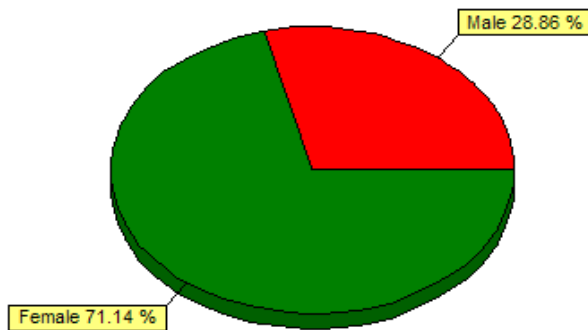
## 7. Diversity

Math students, like the general student population at Coastline reflect the diversity of our community. Respondents to the Program Review Student Survey seem representative of the general math population. Based on survey results, the majority of students fall into two age groups: 48% are 18-30 and 38% are between 31-45. Only 11% are over 45, and even fewer, 3% are under 18.



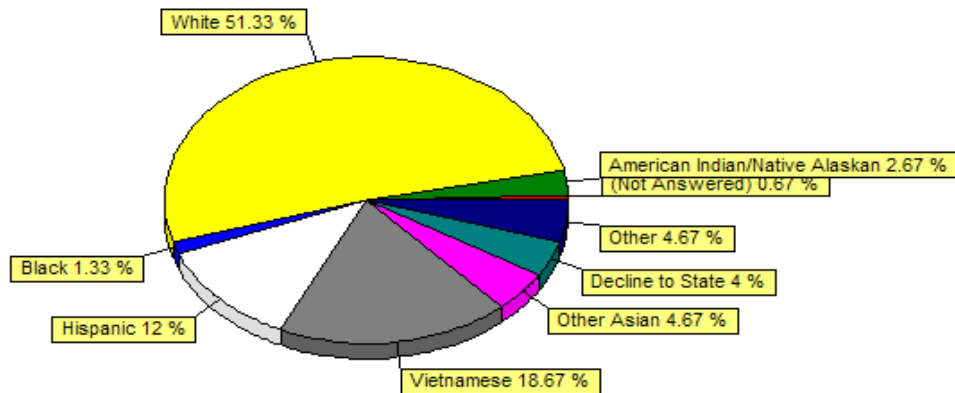
**Figure 9 Student Age**

Survey responses indicate that there are more than twice as many female students as males in math classes.



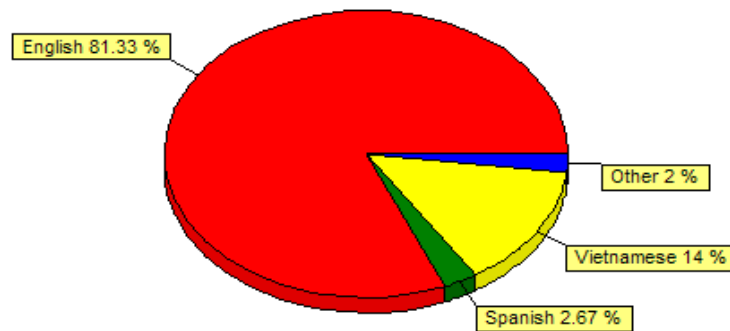
**Figure 10 Student Gender**

Math students represent considerable ethnic diversity, with white students accounting for just over 50% of the total population, Vietnamese and other Asians for 23%, and Hispanics for 12%.



**Figure 11 Student Ethnicity**

More than 81% of student survey respondents indicated that their primary language is English while 14% said Vietnamese, and 3% said Spanish.



**Figure 12 Primary Language**

## 8. Goals

**Progress on Previous Goals:** The Math Department has had considerable success in achieving goals set during the last Program Review conducted in 1999-2000.

- A second full-time faculty member, Lisa Lee, was added in 2001.
- The number of computer-based math courses were increased both in developmental skills math and degree and transfer-level courses.
- Four courses, beginning with Math 100 in 2000-01, were adapted for online delivery.

- Student options were enhanced by offering hybrid classes that combined on-site and online delivery or that offered online classes with optional classroom attendance on an individual as-needed basis.
- A total of 120 graphing calculators were acquired for student use.
- Math tutoring has continued to be offered with additional hours and support through scheduling in the Student Success Center.

**New Five-Year Goals:** The Math Department is committed to providing increased course variety and delivery options and to improving student success. Specific goals include:

- Improve department's ability to develop and implement a student learning outcome assessment cycle by having the department's two full-time faculty members participate in Coastline's Student Learning Outcomes Peer Mentoring Training Program in April and May 2005
- Update all course outlines to include expected student learning outcomes
- Achieve consensus among math faculty on assessment methods and assessment cycle for specific learning outcomes
- Use student learning outcomes data to modify instruction as necessary to improve retention and success
- Develop a schedule for conducting adjunct faculty evaluations and bring all evaluations up-to-date by Fall 2006
- Acquire a new notebook computer capable of running complex math programs for use by the Math Department Chair
- Allocate a sufficient number of classrooms for math hybrid courses with Internet access, ceiling-mounted projectors, and speakers for sound
- Research ways to increase effectiveness of online math courses with 100+ enrollment or consider splitting them into two sections
- Increase faculty workspace and computer/Internet access within the Distance Learning Department



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# Class Info: Count and Percent

## Math Student

**Count      Percent**

**Which math classes did you take this semester? (Mark all that apply.)** Respondents: 150

Math 004 Math Skills	1	0.67 %
Math 005 Beginning Mathematics	4	2.67 %
Math 008 Pre-Algebra	1	0.67 %
Math 010 Elementary Algebra	14	9.33 %
Math 030 Intermediate Algebra	30	20.00 %
Math 100 Quantitative Reasoning	29	19.33 %
Math 103 Activity-Based Probability	1	0.67 %
Math 104 Math for Elementary Teachers 1	11	7.33 %
Math 140 Survey or Calculus	14	9.33 %
Math 150 Finite Mathematics	1	0.67 %
Math 160 Intro to Statistics	34	22.67 %
Math 185 Calculus/Geometry 2	8	5.33 %
Other	5	3.33 %

---

**Total Responses      153      100 %**

**Why are you taking a mathematics course? (Mark all that apply.)** Respondents: 148

To satisfy A.A. degree requirements	49	33.11 %
To satisfy general education requirements for transfer	104	70.27 %
To prepare for a new job	7	4.73 %
To improve my skills for my current job	5	3.38 %
To obtain a promotion	2	1.35 %
For personal interest	6	4.05 %
Other	12	8.11 %

---

**Total Responses      185      100 %**

**To what extent does the content of your current course meet your expectations?** Respondents: 150

The course is even better than I expected	83	55.33 %
The course is pretty much what I expected	57	38.00 %
The course is not what I expected	10	6.67 %

---

**Total Responses      150      100 %**

# Comments re: Expectations Math Student

---

**Question:** You indicated that the course is not what you expected. In what ways does the course not meet your expectations?

The program has many errors which create difficulty to focus on the material when I'm constantly looking to make sure that if I'M doing it right, the computer recognizes that. For example, to type and ordered pair you must type (3,2). If you put a space after the comma, it's wrong. It needs to recognize the numbers as that is what is important. Also, there is supposedly help everywhere for online classes. It's not easily accesible and many of the tools are not at all helpful. Like flashcards? That is probably the worst tutoring tool I have ever seen for a math class once you're above basic mutliplication.

Summary: The online program stinks. It's full of errors.

Help is not easily accesible. It is assumed that the student just "knows" much of the course info (like what "flag the question" means).

I find the completely online course to be extremely difficult. In fact, this is the most difficult class I have ever taken.

Most of the chapters had close to 100 math problems each. I felt that that was excessive.

My answer does'nt mean my expectations were not met. It just means I've never had a class like this before

I didn't think that I would have to teach myself, I thought that there was a teacher each week going chapter bt chapter.

I didn't realize it was so much critical thinking in the first half of the class. Venn diagrams and logic is not what I expected in a math class.

I wanted a classroom environment and it was independant study

I took Math 030 online and thought this online course would have the same support but it is my understanding that changes are being made because of the introduction of the new edition of the textbook.

Its not that it didnt meet my expectation. The teacher was awesome but i just struggle greatly in math. Mr. Feldon was always there to help, the course was just really hard for me personally.



# Classes/Location/Satisfaction: Count and Percent

## Math Student

	Count	Percent
<b>How many math courses have you taken at Coastline?</b>	Respondents: 150	
None	7	4.67 %
This is my first	84	56.00 %
2	37	24.67 %
3	14	9.33 %
4	2	1.33 %
5 or more	6	4.00 %
<b>Total Responses</b>	<b>150</b>	<b>100 %</b>

<b>How many Coastline math courses have you taken through distance learning?</b>	Respondents: 148	
None	60	40.54 %
1 course	57	38.51 %
2 courses	18	12.16 %
3 courses	7	4.73 %
4 courses	4	2.70 %
5 or more courses	2	1.35 %
<b>Total Responses</b>	<b>148</b>	<b>100 %</b>

<b>At which location does your current math class(es) meet or in which delivery mode are you taking your current math class(es)? (Mark all that apply.)</b>	Respondents: 150	
Coastline Costa Mesa Center	28	18.67 %
Coastline Garden Grove Center	47	31.33 %
Fountain Valley High School	1	0.67 %
Student Success Center (Coastline College Center)	4	2.67 %
Telecourse or cable	3	2.00 %
WWW (Internet class)	86	57.33 %
Other	4	2.67 %
<b>Total Responses</b>	<b>173</b>	<b>100 %</b>

<b>Table 1 Preferred Locations/Delivery Modes - Costa Mesa</b>	Respondents: 108	
Preferred	34	31.48 %
OK	31	28.70 %
Not preferred	20	18.52 %
Don't know or n/a	23	21.30 %
<b>Total Responses</b>	<b>108</b>	<b>100 %</b>

# Classes/Location/Satisfaction: Count and Percent

## Math Student

	Count	Percent
<b>Table 1 Preferred Locations/Delivery Modes - Fountain Valley</b>		
Respondents: 113		
Preferred	35	30.97 %
OK	34	30.09 %
Not preferred	18	15.93 %
Don't know or n/a	26	23.01 %
<b>Total Responses</b>	<b>113</b>	<b>100 %</b>

<b>Table 1 Preferred Locations/Delivery Modes - Garden Grove</b>		
Respondents: 108		
Preferred	32	29.63 %
OK	34	31.48 %
Not preferred	20	18.52 %
Don't know or n/a	22	20.37 %
<b>Total Responses</b>	<b>108</b>	<b>100 %</b>

<b>Table 1 Preferred Locations/Delivery Modes - Westminster</b>		
Respondents: 101		
Preferred	21	20.79 %
OK	28	27.72 %
Not preferred	27	26.73 %
Don't know or n/a	25	24.75 %
<b>Total Responses</b>	<b>101</b>	<b>100 %</b>

<b>Table 1 Preferred Locations/Delivery Modes - WWW (Online)</b>		
Respondents: 127		
Preferred	97	76.38 %
OK	14	11.02 %
Not preferred	6	4.72 %
Don't know or n/a	10	7.87 %
<b>Total Responses</b>	<b>127</b>	<b>100 %</b>

<b>Table 1 Preferred Locations/Delivery Modes - Hybrid Class (part in classroom/part online)</b>		
Respondents: 109		
Preferred	29	26.61 %
OK	37	33.94 %
Not preferred	19	17.43 %
Don't know or n/a	24	22.02 %
<b>Total Responses</b>	<b>109</b>	<b>100 %</b>

<b>Table 1 Preferred Locations/Delivery Modes - Telecourse or Cable</b>		
Respondents: 102		
Preferred	33	32.35 %
OK	29	28.43 %
Not preferred	21	20.59 %

# Classes/Location/Satisfaction: Count and Percent

## Math Student

	Count	Percent
<b>Table 1 Preferred Locations/Delivery Modes - Telecourse or Cable</b>	Respondents: 102	
Don't know or n/a	19	18.63 %
<b>Total Responses</b>	<b>102</b>	<b>100 %</b>

<b>You indicated you may be interested in taking a hybrid math class that divides class time between classroom sessions and work and activities conducted online. If you took a hybrid class, how often would you want to meet in the classroom?</b>	Respondents: 66	
Once a week for about half the class time	28	42.42 %
Once every two weeks	25	37.88 %
Once a month	10	15.15 %
Other	3	4.55 %
<b>Total Responses</b>	<b>66</b>	<b>100 %</b>

<b>Table 2 General Satisfaction - Quality of instruction</b>	Respondents: 149	
Very satisfied	118	79.19 %
Somewhat satisfied	25	16.78 %
Somewhat dissatisfied	3	2.01 %
Very dissatisfied	1	0.67 %
Don't know or N/A	2	1.34 %
<b>Total Responses</b>	<b>149</b>	<b>100 %</b>

<b>Table 2 General Satisfaction - Variety of classes</b>	Respondents: 150	
Very satisfied	82	54.67 %
Somewhat satisfied	48	32.00 %
Somewhat dissatisfied	6	4.00 %
Very dissatisfied	1	0.67 %
Don't know or N/A	13	8.67 %
<b>Total Responses</b>	<b>150</b>	<b>100 %</b>

<b>Table 2 General Satisfaction - Adequacy of instructional facilities</b>	Respondents: 149	
Very satisfied	95	63.76 %
Somewhat satisfied	37	24.83 %
Somewhat dissatisfied	2	1.34 %
Very dissatisfied	2	1.34 %
Don't know or N/A	13	8.72 %
<b>Total Responses</b>	<b>149</b>	<b>100 %</b>

# Classes/Location/Satisfaction: Count and Percent

## Math Student

	Count	Percent
<b>Table 2 General Satisfaction - Quality of specialized equipment</b>		
	Respondents: 149	
Very satisfied	83	55.70 %
Somewhat satisfied	30	20.13 %
Somewhat dissatisfied	4	2.68 %
Very dissatisfied	2	1.34 %
Don't know or N/A	30	20.13 %

**Total Responses    149            100 %**

<b>Table 2 General Satisfaction - Quality of general instructional equipment</b>		
	Respondents: 150	
Very satisfied	87	58.00 %
Somewhat satisfied	39	26.00 %
Somewhat dissatisfied	2	1.33 %
Very dissatisfied	2	1.33 %
Don't know or N/A	20	13.33 %

**Total Responses    150            100 %**

<b>Table 2 General Satisfaction - Staff support for the program and classes</b>		
	Respondents: 149	
Very satisfied	115	77.18 %
Somewhat satisfied	25	16.78 %
Somewhat dissatisfied	1	0.67 %
Very dissatisfied	2	1.34 %
Don't know or N/A	6	4.03 %

**Total Responses    149            100 %**

<b>Table 2 General Satisfaction - Extent to which faculty and staff meet the needs of culturally diverse students</b>		
	Respondents: 148	
Very satisfied	81	54.73 %
Somewhat satisfied	23	15.54 %
Somewhat dissatisfied	1	0.68 %
Very dissatisfied	1	0.68 %
Don't know or N/A	42	28.38 %

**Total Responses    148            100 %**

<b>Table 2 General Satisfaction - Extent to which faculty and staff meet the needs of non-traditional students (e.g., older adults, working adults, etc.)</b>		
	Respondents: 149	
Very satisfied	92	61.74 %
Somewhat satisfied	32	21.48 %

# Classes/Location/Satisfaction: Count and Percent

## Math Student

Count Percent

**Table 2 General Satisfaction - Extent to which faculty and staff meet the needs of non-traditional students (e.g., older adults, working adults, etc.)** Respondents: 149

Somewhat dissatisfied	3	2.01 %
Very dissatisfied	2	1.34 %
Don't know or N/A	20	13.42 %
<b>Total Responses</b>	<b>149</b>	<b>100 %</b>

**Table 2 General Satisfaction - Overall quality of the program** Respondents: 149

Very satisfied	107	71.81 %
Somewhat satisfied	37	24.83 %
Somewhat dissatisfied	1	0.67 %
Very dissatisfied	2	1.34 %
Don't know or N/A	2	1.34 %
<b>Total Responses</b>	<b>149</b>	<b>100 %</b>

**Table 2 General Satisfaction - Your own success in the program** Respondents: 148

Very satisfied	89	60.14 %
Somewhat satisfied	43	29.05 %
Somewhat dissatisfied	8	5.41 %
Very dissatisfied	2	1.35 %
Don't know or N/A	6	4.05 %
<b>Total Responses</b>	<b>148</b>	<b>100 %</b>

# General Satisfaction Comments

## Math Student

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**Question:** If you answered "Somewhat dissatisfied" or "Very dissatisfied" to any of the above items, please explain your concerns.

Need instructional facility further north central in state of California. This would enable students (who live in central CA to attend midterm/final reviews and take exams along with the rest of class. Also would be able to obtain tutoring if needed.

Not satisfied that ALL of the learning is truly online.

L. Lee, instructor has been the best online instructor that I've had over the past two years. I've attended classes at Univ of Phoenix and currently am enrolled at Calif State Univ Dominguez Hills BSN program (online). Lisa Lee is outstanding. She is to be commended... she does everything possible so that students succeed in her class.

the software for the program is very narrow, and will not accept correct answers in more than one form. We had tremendous trouble with the TestGen plug-in, to the extent that we had to get a new computer. Our computer tech spent hours and hours with TestGen people and no one could resolve the issues.

The completely Online program is extremely difficult.

The classroom I took my hybrid math course had three classes in it. There were only 30 seats available for three different math courses.

The computer equipment is extremely helpfull because I dont have the internet..... There are many different ethnic people here..... I am doing much beter than I htought I could possibly do.

I did it to myself agian , just not spending enough time on line and not doing a some every day.

The selection of courses for math are not very wide or rather there's not that many classes to choose from.

I'm not a very good student. It takes disipline to be a good student

I don't normally do well in Math classes that are self motavated. Also there were not a lot to pick from on times and day's that they met.

It's not your fault, but the math software for midterms and finals are differnt from the regular homework and quizzes. It's not as smart, and a bit more frustrating.

Lack of classes at Costa Mesa Center. Garden Grove and Westminster are too far for me to drive after a 10 to 12 hour day.

# General Satisfaction Comments

## Math Student

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**Question:** If you answered "Somewhat dissatisfied" or "Very dissatisfied" to any of the above items, please explain your concerns.

Quality of specialized equipment, not sure if im understanding the question right, but i didnt like how the program would take my homework and not my quizzes... which means i had to figure out who could watch my daughter when i took them at a location, and got sent to 2 locations because labs werent open on those days..... My own success in program guess im not happy because i do better in a classroom setting where i can ask questions.. i thought i was doing ok till after midterm grades were posted than i basicly dived the class... now hoping i pass with only weeks left after that grade and nothing i can really do to make it improve...

I am just somewhat disatisfied about my success, however that would not be neither the instructor's or faculty's fault. I love my instructor, she's patient and understanding. Thank you Anasa!

on line instruction was basically good but some aspects went to fast to truly understand problems and some of the instructors need to write with darker pens or larger because I had to really search to read problems. Pre typed problems were easiest to read.

Need more distance learning classes

one thing was how the online homework had nothing to do with the test.

Math is a very difficult course to take online.

I just don't do well in math.

I feel that I did not put in as much effort as I should have

I took one class that was abysmal - it met at Fountain Valley High School - which is not a great venue, and the teacher was just bad. The other 2 experiences I have had were great. One was a telecourse and the other was an internet course. The tests were given at the Huntington Beach location, and the teachers, Mr. Deitrich and Ms. Lee were both excellent. They were able to make the complex look easy.

Because of the limited time spent in the classroom, I had to teach myself algebra. The internet was superior to traditional book learning, however, it lacked the introduction necessary for students to observe and learn prior to completing assignments. In other words, I would have prefered to learn math from an instructor, and then implement what was taught to me through practice on the internet.

More biology classes

# Distance Learning: Count and Percent

## Math Student

Count      Percent

**Table 3 Distance Learning - Overall, the caliber of my distance learning math course at Coastline is equivalent to or better than the quality of my classroom-based courses.**

Respondents: 87

Strongly agree	39	44.83 %
Agree	33	37.93 %
Disagree	6	6.90 %
Strongly disagree	3	3.45 %
Don't know or n/a	6	6.90 %

---

**Total Responses      87      100 %**

**Table 3 Distance Learning - The caliber of the distance learning math courses at Coastline is equivalent to or better than the quality of other distance learning courses of which I am aware.**

Respondents: 87

Strongly agree	40	45.98 %
Agree	31	35.63 %
Disagree	4	4.60 %
Strongly disagree	2	2.30 %
Don't know or n/a	10	11.49 %

---

**Total Responses      87      100 %**

**Table 3 Distance Learning - I have as much or more interaction with the instructor in my distance learning math courses as I do with instructors in classroom-based courses.**

Respondents: 87

Strongly agree	38	43.68 %
Agree	25	28.74 %
Disagree	18	20.69 %
Strongly disagree	4	4.60 %
Don't know or n/a	2	2.30 %

---

**Total Responses      87      100 %**

**Table 3 Distance Learning - I have as much or more interaction with fellow students in my distance learning math courses as I do with students in classroom-based courses.**

Respondents: 87

Strongly agree	15	17.24 %
Agree	32	36.78 %
Disagree	27	31.03 %
Strongly disagree	7	8.05 %
Don't know or n/a	6	6.90 %

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**Total Responses      87      100 %**



# Distance Learning: Count and Percent

## Math Student

	Count	Percent
<b>Table 3 Distance Learning - I am satisfied with the amount of interaction I have with the instructor and with fellow students in my distance learning math class(es).</b>		
Respondents: 87		
Strongly agree	43	49.43 %
Agree	38	43.68 %
Disagree	2	2.30 %
Strongly disagree	2	2.30 %
Don't know or n/a	2	2.30 %
<b>Total Responses</b>	<b>87</b>	<b>100 %</b>

<b>Table 3 Distance Learning - The technology used to deliver my distance learning math course(s) has been reliable.</b>		
Respondents: 87		
Strongly agree	44	50.57 %
Agree	36	41.38 %
Disagree	3	3.45 %
Strongly disagree	3	3.45 %
Don't know or n/a	1	1.15 %
<b>Total Responses</b>	<b>87</b>	<b>100 %</b>

<b>Table 3 Distance Learning - MyMathLab or Aleks Website was easy to navigate.</b>		
Respondents: 86		
Strongly agree	42	48.84 %
Agree	36	41.86 %
Disagree	6	6.98 %
Strongly disagree	1	1.16 %
Don't know or n/a	1	1.16 %
<b>Total Responses</b>	<b>86</b>	<b>100 %</b>

<b>Table 3 Distance Learning - Modules were easy to find on the MyMathLab or Aleks Website.</b>		
Respondents: 85		
Strongly agree	38	44.71 %
Agree	38	44.71 %
Disagree	8	9.41 %
Don't know or n/a	1	1.18 %
<b>Total Responses</b>	<b>85</b>	<b>100 %</b>

<b>Table 3 Distance Learning - MyMathLab or Aleks assignments were clear.</b>		
Respondents: 87		
Strongly agree	42	48.28 %
Agree	34	39.08 %
	8	9.20 %

# Distance Learning: Count and Percent

## Math Student

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	Count	Percent
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**Table 3 Distance Learning - MyMathLab or Aleks assignments were clear.** Respondents: 87

Disagree

Strongly disagree

Don't know or n/a

2

2.30 %

1

1.15 %

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<b>Total Responses</b>	<b>87</b>	<b>100 %</b>
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# Distance Learning Comments

## Math Student

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**Question:** If you experienced any technical difficulties or if you answered "Disagree" or "Strongly disagree" to any of the above statements, please explain the problems you encountered or the nature of your concerns.

Modules in My Math Lab were easy to find; however Aleks Website was not of any use.

see previous comment. There is no interaction that I could find with other students at all, but Professor Feiner was always very available.

Many of the "topics" in MyMathLab were not utilized by instructor. As stated before, MyMathLab has many errors (Like mutiple choice questions with two of the same answers, but only one is right... so, you get the right solution, but still have a 50% chance of getting the wrong answer).

It takes looking in THREE different places (2 different places online and then the syllabus to find out what % of your grade each score makes up) to figure out your standing in the class! The online system does NOT compute the grades with the same weight as they actually count for. Before class began, I printed out the midterm and final dates and places for review and exam - these were WRONG! The teacher had DIFFERENT info on the syllabus and did not make any effort to remind students of the review - only of the exam. My midterm grade disappeared from online - I had to contact the teacher to find out why. He knew of the issue but waited for questions to be asked... it moved to a different grade page (which makes the 3rd place I have to look at to figure my standing). During the tests, you are only allowed two sheets of scratch paper - this is hardly adequate for quick work for students who do their best without breaking their concentration.

Also - there is the option to print your homework. However, you can not DO your homework offline as when you log back in - the #'s in the problems are all different. It takes several hours to complete 100+ homework questions, it's hard to do staring at a computer screen, but you have no option unless you keep yourself logged in for the entire time it takes you to complete the homework on paper.

Need more detail instruction on how to get click into the class easier.

I cannot work with my home coputer for some exercises such as Midterm and Final Practices

I have less interaction with my colleagues (students) in my distance learning class; however, I prefer to have less interaction with my colleagues. The reason being is that I stay more in focused with the curriculum.

We definitely had some issues with the homework / quiz modules and answer accuracy.

Some of the math problems they did not specify what form they wanted the answer. For example: One of the ansers I got wrong I put 2 to the second poer times three and they

# Distance Learning Comments

## Math Student

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**Question:** If you experienced any technical difficulties or if you answered "Disagree" or "Strongly disagree" to any of the above statements, please explain the problems you encountered or the nature of your concerns.

wanted 2 times 2 times 3. Also, there was some confusion on which fill in bubble went to which problem. The email system was terrible. My assignment I e-mailed my instructor got to him over four weeks later. Most people who e-mailed the second assignment sent it two and even three times because it was not processing properly.

Interaction with instructor is much less than in a classroom based class. Unfortunately being in the classroom is impossible for me since I live in Northern California. Mr. Wagner was helpful and he did answer emails promptly.

The convenience of home cannot be beat, but math is a subject that some students will need special attention (like me). I understand that these classes are full, and these teachers do more than they are suppose too, but a video teacher and some exercises sometimes don't cut it. There is no interaction with other people in a on line math class, unless you are taking it with a friend, and you also don't see your teacher very often, hence the disagrees, or strongly disagrees

I am not able to access the videos at home even though I reloaded the software many times. I could not get it to work and the advice given by the website did not work so I gave up trying to access it at home.

class u can ask questions and get written examples about problems...  
in a class room you are face to face with the instructors which to me means more of an interaction than on the computer..... my technology with my comptuer were great for the class just still not sure why i couldnt turn in quizzes on line just homework from my computer

I found that the CD, where the teacher actually instructs and is filmed is much better than MyMathLab videos

Internet Service Provider on my side had problems, and could not find an open computer lab that fit my schedule and had the special software downloads needed for this course.

I marked strongly disagreed because I could never get the tests and homework to come up online.

the formulas in MyMathLab were not the same as in the book. this made it difficult to learn which formula to use.

There just isn't that much interaction between students (although there is some)

The interaction between fellow students and the instructor is difficult. However, in this

# Distance Learning Comments

## Math Student

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**Question:** If you experienced any technical difficulties or if you answered "Disagree" or "Strongly disagree" to any of the above statements, please explain the problems you encountered or the nature of your concerns.

class, I don't think it hindered my learning.

Sometimes it is better to talk face to face than a machine.

The Test-Gen plug-in would routinely uninstall itself after each test and I had to reinstall it several times-frustrating at best.

MyMabLab was great once you understood it. However, it takes a little bit of time and trial and error. In my first class with MyMathLab, I went thru half the class doing homework on the wrong page and was not getting any credit for it. This course, Math 100, did not have the helpful programs that the Math 30 program had.

It lacked prior instruction to the math chapters before practice. Maybe instructional (classroom videos) would have helped

no problems.

# Internet Access and SLOs: Count and Percent

## Math Student

	Count	Percent
<b>From what location do you usually access the Internet?</b> Respondents: 86		
Home	65	75.58 %
Work	1	1.16 %
Both home and work	18	20.93 %
Library	1	1.16 %
College computer lab/info commons	1	1.16 %

**Total Responses    86        100 %**

<b>What type of computer do you use most often to access the Internet?</b> Respondents: 86		
PC	80	93.02 %
Mac	5	5.81 %
Other	1	1.16 %

**Total Responses    86        100 %**

<b>What browser do you usually use when accessing the Internet?</b> Respondents: 85		
AOL's browser	15	17.65 %
Firefox	3	3.53 %
Internet Explorer	61	71.76 %
Netscape 7	1	1.18 %
Safari	2	2.35 %
Other	3	3.53 %

**Total Responses    85        100 %**

<b>What type of Internet connection do you generally use?</b> Respondents: 86		
Dial-up	26	30.23 %
Cable	22	25.58 %
DSL	31	36.05 %
T1	5	5.81 %
Other	2	2.33 %

**Total Responses    86        100 %**

<b>Table 4 Importance of Specific SLOs - Perform basic consumer-type math skills</b> Respondents: 149		
Very important	99	66.44 %
Important	48	32.21 %
Less important	1	0.67 %
Not important	1	0.67 %

**Total Responses    149        100 %**

# Internet Access and SLOs: Count and Percent

## Math Student

Count      Percent

**Table 4 Importance of Specific SLOs - Use basic math in your work setting**      Respondents: 147

Very important	81	55.10 %
Important	54	36.73 %
Less important	8	5.44 %
Not important	4	2.72 %

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**Total Responses      147      100 %**

**Table 4 Importance of Specific SLOs - Make informed purchasing choices based on an understanding of interest rates**      Respondents: 148

Very important	82	55.41 %
Important	51	34.46 %
Less important	10	6.76 %
Not important	5	3.38 %

---

**Total Responses      148      100 %**

**Table 4 Importance of Specific SLOs - Develop quantitative reasoning skills for my non-math classes**      Respondents: 148

Very important	66	44.59 %
Important	63	42.57 %
Less important	13	8.78 %
Not important	6	4.05 %

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**Total Responses      148      100 %**

**Table 4 Importance of Specific SLOs - Develop quantitative reasoning skills for my work and career**      Respondents: 147

Very important	72	48.98 %
Important	60	40.82 %
Less important	9	6.12 %
Not important	6	4.08 %

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**Total Responses      147      100 %**

**Table 4 Importance of Specific SLOs - Apply quantitative reasoning skills to life issues (e.g., voting responsibly, understanding the media)**      Respondents: 149

Very important	68	45.64 %
Important	61	40.94 %
Less important	11	7.38 %
Not important	9	6.04 %

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**Total Responses      149      100 %**

# Internet Access and SLOs: Count and Percent

## Math Student

Count      Percent

**Table 4 Importance of Specific SLOs - Use quantitative reasoning skills to make intelligent consumer choices (e.g., selecting a home mortgage or insurance plan)**

Respondents: 149

Very important	88	59.06 %
Important	53	35.57 %
Less important	5	3.36 %
Not important	3	2.01 %

**Total Responses      149      100 %**

**Table 4 Importance of Specific SLOs - Use math formulas within an Excel spreadsheet**

Respondents: 149

Very important	48	32.21 %
Important	63	42.28 %
Less important	29	19.46 %
Not important	9	6.04 %

**Total Responses      149      100 %**

**Table 4 Importance of Specific SLOs - Solve math problems presented in numerals**

Respondents: 149

Very important	63	42.28 %
Important	72	48.32 %
Less important	9	6.04 %
Not important	5	3.36 %

**Total Responses      149      100 %**

**Table 4 Importance of Specific SLOs - Solve math problems presented as word problems**

Respondents: 149

Very important	62	41.61 %
Important	66	44.30 %
Less important	15	10.07 %
Not important	6	4.03 %

**Total Responses      149      100 %**



# Other Skills or Learning Outcomes

## Math Student

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**Question:** Are there other skills or learning outcomes that you think are important for individuals completing courses in mathematics?

I think that understanding mathematics from a historical or humanistic perspectives is also very important for a student. That could make the subject more meaningful and develop a better appreciation of it.

Basic math and fractions - conversion

In most cases the math courses students take will not come up in life. Although, basic math and some math 030 will come out in their daily lives. I'm all for knowledge people should possess, but I'm against unnecessary headaches.

no

Math is a language and in today's computer generated world it is an essential tool to have a basic understanding of higher level math.

No, that's plenty!

no

basic computer skills, I had lots of problems with downloading programs.

Do on Calculator Faster.

none.

Budgeting/Business planning

# Demographics: Count and Percent

## Math Student

	Count	Percent
<b>Age</b>	Respondents: 149	
Under 18	5	3.36 %
18-30	72	48.32 %
31-45	56	37.58 %
46-60	14	9.40 %
61 or older	2	1.34 %
<b>Total Responses</b>	<b>149</b>	<b>100 %</b>
<b>Gender</b>	Respondents: 149	
Male	43	28.86 %
Female	106	71.14 %
<b>Total Responses</b>	<b>149</b>	<b>100 %</b>
<b>Ethnicity</b>	Respondents: 149	
American Indian/Native Alaskan	4	2.68 %
White	77	51.68 %
Black	2	1.34 %
Hispanic	18	12.08 %
Vietnamese	28	18.79 %
Other Asian	7	4.70 %
Decline to State	6	4.03 %
Other	7	4.70 %
<b>Total Responses</b>	<b>149</b>	<b>100 %</b>
<b>Primary Language</b>	Respondents: 150	
English	122	81.33 %
Spanish	4	2.67 %
Vietnamese	21	14.00 %
Other	3	2.00 %
<b>Total Responses</b>	<b>150</b>	<b>100 %</b>
<b>What is your current employment status?</b>	Respondents: 150	
Not working	33	22.00 %
Working as a volunteer (non-paid position)	7	4.67 %
Working 20 hours or less per week	16	10.67 %
Working between 21-30 hours per week	20	13.33 %
Working full-time	74	49.33 %
<b>Total Responses</b>	<b>150</b>	<b>100 %</b>

# Demographics: Count and Percent

## Math Student

	Count	Percent
<b>What is your highest level of education?</b>	Respondents: 150	
Less than high school completion	6	4.00 %
High school diploma	83	55.33 %
Associate in Arts degree	47	31.33 %
Bachelor's degree	12	8.00 %
Master's degree	2	1.33 %

**Total Responses    150            100 %**

<b>Are you currently enrolled at another college in addition to your Coastline classes?</b>	Respondents: 143	
<b>(Mark all that apply.)</b>		

Golden West College	30	20.98 %
Irvine Valley College	2	1.40 %
Orange Coast College	19	13.29 %
Santa Ana College	1	0.70 %
Santiago Canyon College	1	0.70 %
Other community college	15	10.49 %
A four-year college or university	30	20.98 %
No: Enrolled only at Coastline	60	41.96 %

**Total Responses    158            100 %**

<b>Have you ever used math tutoring services at Coastline?</b>	Respondents: 150	
Yes	23	15.33 %
No	127	84.67 %

**Total Responses    150            100 %**

<b>You indicated that you have never used math tutoring. Please tell us why. (Mark all that apply.)</b>	Respondents: 132	
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Don't need tutoring	57	43.18 %
Hours not convenient	29	21.97 %
Location not convenient	18	13.64 %
Online or phone tutoring not available	11	8.33 %
Didn't know tutoring was available	15	11.36 %
Other	32	24.24 %

**Total Responses    162            100 %**

# Other Courses and General Comments

## Math Student

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**Question:** Are there other math courses in that you would like Coastline to offer?

high school math classes

what about logic?

Keep the math classes online. When you do homework you will know that you are doing the work right and the grade right away.

none

Trig.

Calculus

Math 160

Math 08 should be taught online instead of in class.

no!

no thanks

No

NO

no

no

Our instructor is very well

no

no

no

No.

no

upper level statistics by feldon

Not at this time.

008 in a similar setting as 005 with Feldon

no

# Other Courses and General Comments

## Math Student

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**Question:** Are there other math courses in that you would like Coastline to offer?

I saw that higher calculus classes were offered last semester but they were taken off of the spring semester.

sign language, more variety on arts and music subjects.

Pre-calculus and Calculus I, Hybrid preferred.

No, Coastline currently provides all of the math classes that I require.

None at this time.

n/a

i'd like to see an advanced geometry or trigonometry class.

no

IN CLASS MEETING MATH150 AND MORE CLASS AFTER MATH 180

YES! College algebra over the WWW which seems that you've just added, but I used "ASSIST" to verify that it was CSU transferable and it doesn't transfer!

discrete math

no

Currently, I don't need any other math courses.

Yes. Some math class in 200s and 300s

No.

no

math 154 & 157

Geometry

Business Calculus

# Other Courses and General Comments

## Math Student

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**Question:** Do you have any comments or suggestions for improving the Math Program at Coastline?

Make the self-paced classes more flexible, I mean, do not limit the number of chapters to be finished per semester.

New Program. Require teachers to provide ONE up to date place where you can see your standing in the class. Require teachers to regularly post updates of dates/times for review. Offer more review sessions than just a week before major exams. Vary the time/place of the review sessions. Require teachers to take a more active role in online education. Provide a more interactive online learning environment (where help from the teacher and other students is easily accessible). Require the program to allow you to PRINT your homework to complete offline and return later to type in the answers without the problems changing.

Keep the instructor - Mr. Feiner - VERY, VERY Good teacher and a patient and caring teacher

When someone is taking a test in the Student Success Center, it needs to be MANDATORY that there is absolute quiet. I took a test there and found it hard to concentrate because other students and staff were talking loudly.

There are many different tools to apply to solve problems such as exponent, radical, fraction... : Doing homeworks, assigned tests is different to doing practice Midterm, Final...

MyMathLab does not have a full syllabus of problems for every chapter of Quantitative Reasoning, Math 100. This was the biggest problem. In addition, a lot of problems they had ended up being wrong.

I took Math 030 via MyMathLab and it was great.

Have tests relate to the math homework.

I think the math program at Coastline is awesome. I love the ability to complete the homework online, and it is the best math class I've taken thus far!

The classes seemed to have a lot of homework. I am only taking one class and I still spend 8-10 hrs per week on homework and tests. I also thought that the midterm had too many questions. It took almost 3 hrs to do and that is just too much, and I believe the final will have double the amount of questions.

I found Math100 with Feldon to be a very informative class. The text that we have learned in class is very useful in every day life and I have learned beneficial information

# Other Courses and General Comments

## Math Student

---

**Question:** Do you have any comments or suggestions for improving the Math Program at Coastline?

that I will use for the rest of my life. The amount of work has been easy to juggle with working full time. I have been very pleased with this online course and would love to take another class if it were set up and as easily accessible as Math100. Response time for questions and communication was definately the key to my success in this course.

Yes, I have a suggestion for the powers to be at Coastline. Keep your program as it is by giving students a choice. Do not do what Golden West did with their department and add a Laboratory that requires certification.

Have the teachers interact with every student every class, to make sure everything is o.k. with class work

All math courses should be offered online - easier for working students.

Math 05 textbook not a good instructional resource, waste of money (\$160) - ALEKS system explains problem solving in more detail than book. Great learning program.

I have been impressed with the Person math system it is easy to navagate and very interactive.

no!

Anasa Liu is the best! She is very patient with me, I am not the best at math and she really explains it well.

No

Yes, provide cable TV for big screen in class

no

Hve more selections of classes and time.

Not really. overall its pretty good

no

no

make classes with teachers in the class every week more available.

no

Be sure to mention on the website that the programs through MathLab are not

# Other Courses and General Comments

## Math Student

---

**Question:** Do you have any comments or suggestions for improving the Math Program at Coastline?

compatible with Macs. I am lucky that I have a PC as well, otherwise I would not have been able to take the class.

No.

have it actually TAUGHT! that's what a teacher is for!

I really enjoyed the professor from St. Leo University (I believe that's where she teaches) anyway she was very helpful in relating the information from the book to the student. Using many examples and not just reading from the book (because I can do that) is very important to really solidify the information. I can teach myself many things but it doesn't take as long when you have a teacher who knows how to take the info from the book and make it come alive for the student. Please thank her for her help and ask her to do more of the video lectures in later chapters. Mr. Triola was okay too.

I learned a great deal from Mr. Feldon and he was very helpful.

Not at this time.

stated above

no

I liked this class and the web format was very easy to navigate and use.

I have especially enjoyed the video lessons that are accessible from the course web site.

I thought that the program was structured well, and I cannot think of any necessary improvements.

Recommend the instructors be more flexible than rigid like Mr. Feldon he understands students work or have families. He responds quickly to your questions, and his assignments/homework reflected the objectives. He helps foster that you understand the concept of that particular objective. I was not made to feel, here is the objective, read it, do the homework and if any questions contact me and I'll get back to you as soon as I can. This was the first Math class I have ever enjoyed, I was not filled with anxiety. I believe Math has a stigma of being only for those who are smart. Which was not true in this class. I would take any Math class as long as Mr. Feldon is the instructor.

You have an excellent math program!

I learned very much in my Math 140 at Garden Grove Center (Fall 04)



# Other Courses and General Comments

## Math Student

---

**Question:** Do you have any comments or suggestions for improving the Math Program at Coastline?

some self-pased courses in all math classes

make sure that the online tests go along with the homework

Mr. Feldon response all Math class over 100

Nope. It was just fine- Well, for math 30 there was A LOT (too much) homework. Math 160 was much much better and Prof. Lee is an excellent and dedicated Professor.

no

No

None that I can think of at the moment.

The flexibility is the most important feature to me.

Be able to get help on homework questions at the time I'm doing the computer online homework. I think this was a course compass company error.

The test didn't seem to correspond with the homework online.

no

improve the MyMathLab program to include help with the homework assignments on Math 100

As a adult learner I was very impressed with the math instructor and program offered at Coastline. I would recommend this course to anyone. Thank you

I am astonished at how interactive, responsive, available, encouraging, and helpful Professor Lee is. I have never experienced such an incredibly concerned instructor. I am impressed with the ineteraction of so many of the students who are in my class. I have commented to my friends and family that this is more interaction than I have seen in any of the "classroom" courses I have taken. I don't think all on-line courses are this way, but it sure would be great if they were. I'd be willing to take many more with Professor Lee.

I purchased videos for Math 125 and found them non-useful. I would have prefered to have a video that demonstrated step by step methods to each chapter. An example would be to record a instructor teaching the course as they do on a homework tutor program which is brodcasted on a public channel for the school children to call/write into for help

# Other Courses and General Comments

## Math Student

---

**Question:** Do you have any comments or suggestions for improving the Math Program at Coastline?

Dr. Lisa Lee is an excellent and very attentive online math teacher.

Thank you so much for an excellent online math experience, Dr. Lee.

# Listing of "other" Responses by Question

## Math Student

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**Question:** Which math classes did you take this semester? (Mark all that apply.)

Math 106  
Math 106 Math for Elem Teachers II  
Math 106  
Math 106  
Math 106

---

**Question:** Why are you taking a mathematics course? (Mark all that apply.)

to make up a high school grade  
For check my children's math  
To satisfy requirements to graduate  
change of career  
To satisfy A.S. degree requirements at another school  
I am w/ cal state & they are not accepting the algebra i took 17 years ago  
i didn't want to take ap statistics at my highschool  
bachelors degree requirement  
to satisfy BA requirements  
Prerequisite for Masters  
Degree requirements  
leading to BSN

---

**Question:** At which location does your current math class(es) meet or in which delivery mode are you taking your current math class(es)? (Mark all that apply.)

homework through a web site and book  
proctor administered tests  
hybrid

---

**Question:** You indicated you may be interested in taking a hybrid math class that divides class time between classroom sessions and work and activities conducted online. If you took a hybrid class, how often would you want to meet in the classroom?

depends on location of class.... distant learner (I'm from Fresno, along w/two other students in the class)  
every class  
depends on length of class

---

**Question:** What type of computer do you use most often to access the Internet?

laptop

---

**Question:** What browser do you usually use when accessing the Internet?

Mozilla  
yahoo

---

**Question:** What type of Internet connection do you generally use?

Lan line (Japan)  
I don't know what they use at this university where I work.

---

**Question:** Ethnicity

Mestizo  
Mexican  
mislado /white and hispanic  
HUMAN  
cuban

---

**Question:** Primary Language

Portuguese  
Laosian

---

**Question:** You indicated that you have never used math tutoring. Please tell us why. (Mark all that apply.)

Five hour drive (one-way)  
Online Tutoring not EFFECTIVE  
not enough time  
wrong answer - I did use tutoring - good - more tutoring people  
Travel frequently  
I have no car and am a procrastinator  
no time with their schedule  
I heard that the tutors are high school students. I would feel intimidated being tutored by a high school student.  
not sure as to when it's available  
not enough time, busy  
Tutoring not available for Math 185  
used the online math help that came with the book  
personal tutor  
I choose yes, to this question. I have used tutoring lab  
busy  
your video lectures are great!!  
dont know  
It is my understanding that the tutors were not able to help those who went in because of the kind of class it is.  
dont have babysitter and cant afford one either  
I have used tutoring  
The teacher was always there to help  
Only went to teacher office hours to ask questions from instructor.  
have friends that can tutor me  
used ccc tutoring  
did not take advantage  
Use my sister to assist as needed  
my instructor was very resourceful  
I used other resources  
MyMathLab sufficient

# Bar Graphs

## Math Student

To what extent does the content of your current course meet your expectations?

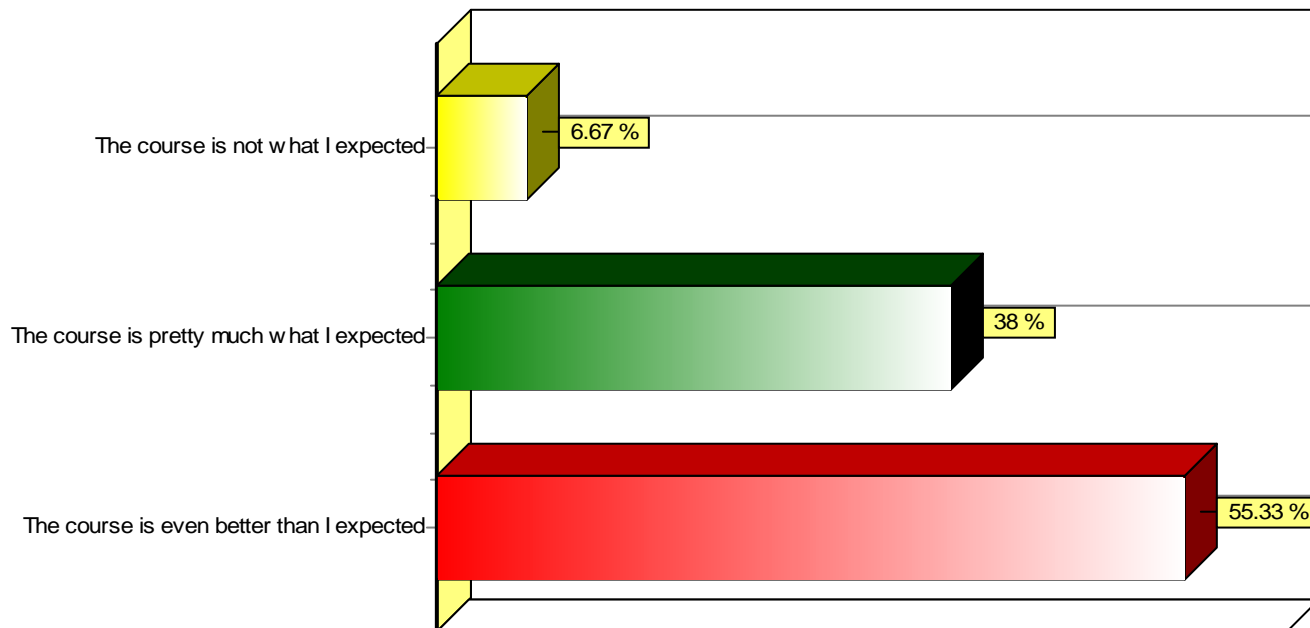
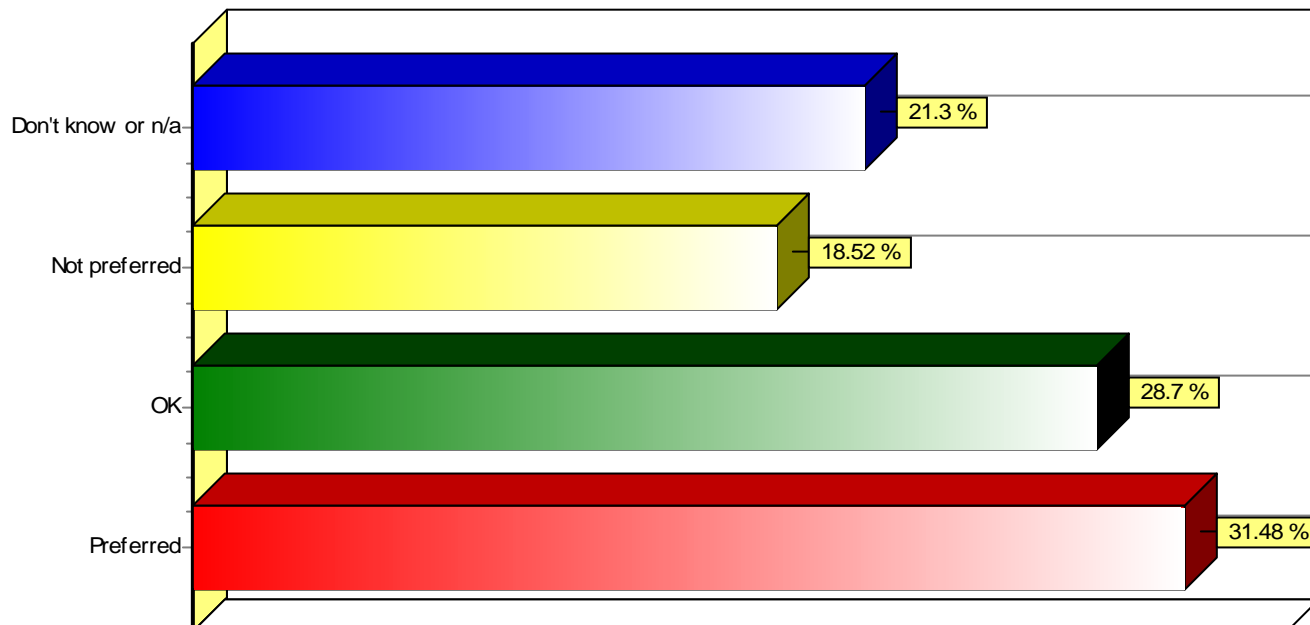


Table 1 Preferred Locations/Delivery Modes - Costa Mesa



# Bar Graphs

## Math Student

Table 1 Preferred Locations/Delivery Modes - Fountain Valley

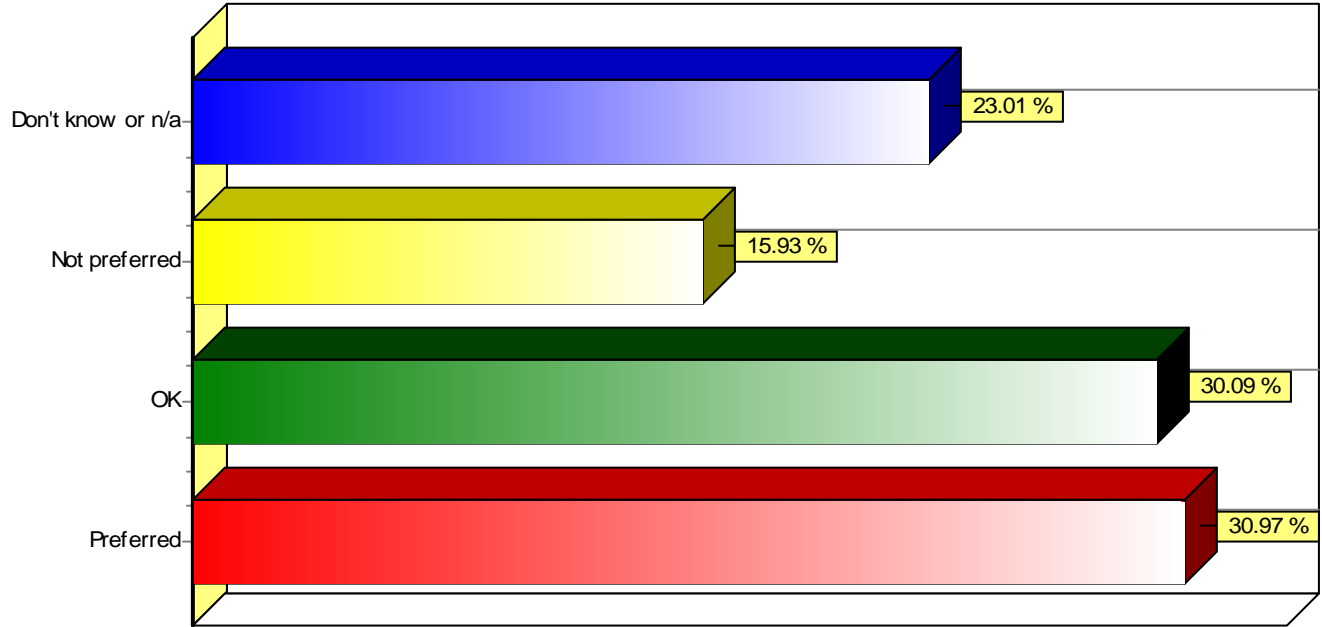
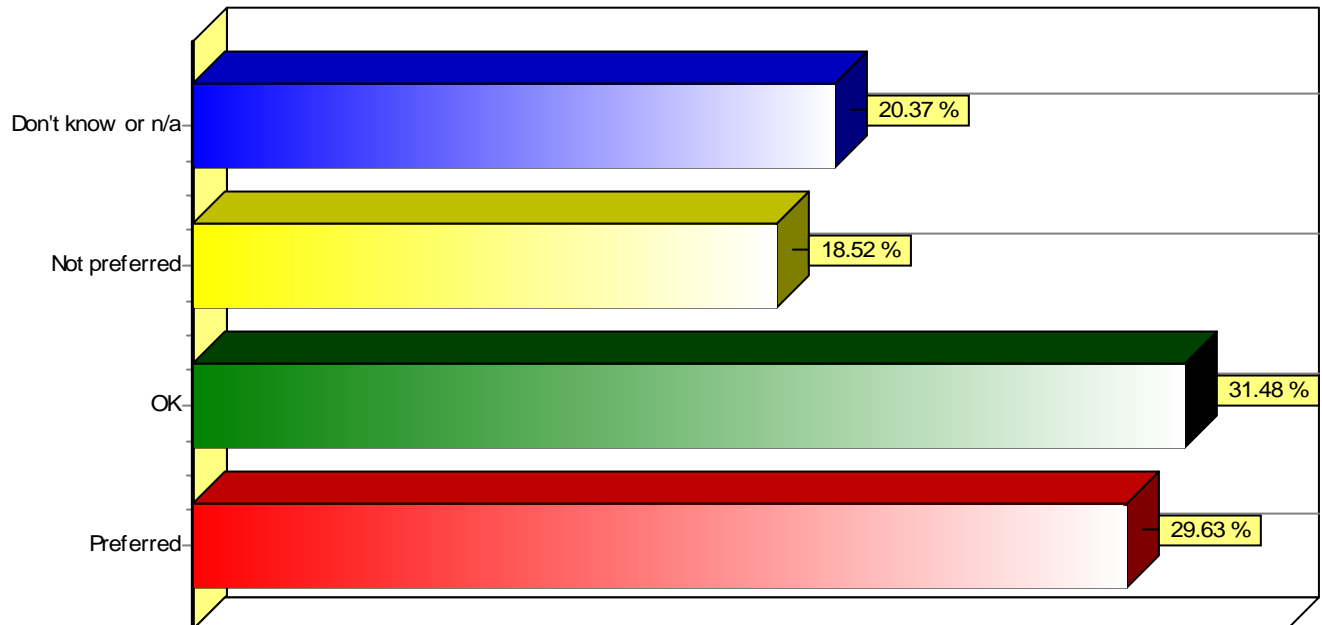


Table 1 Preferred Locations/Delivery Modes - Garden Grove



# Bar Graphs

## Math Student

Table 1 Preferred Locations/Delivery Modes - Westminster

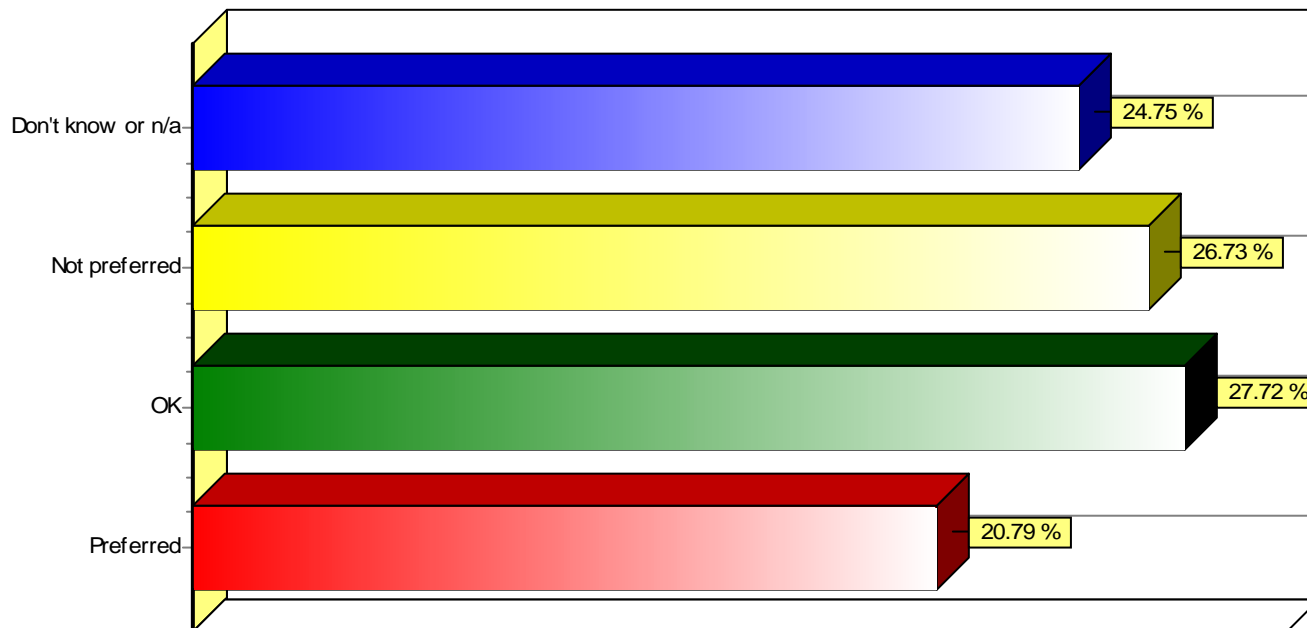
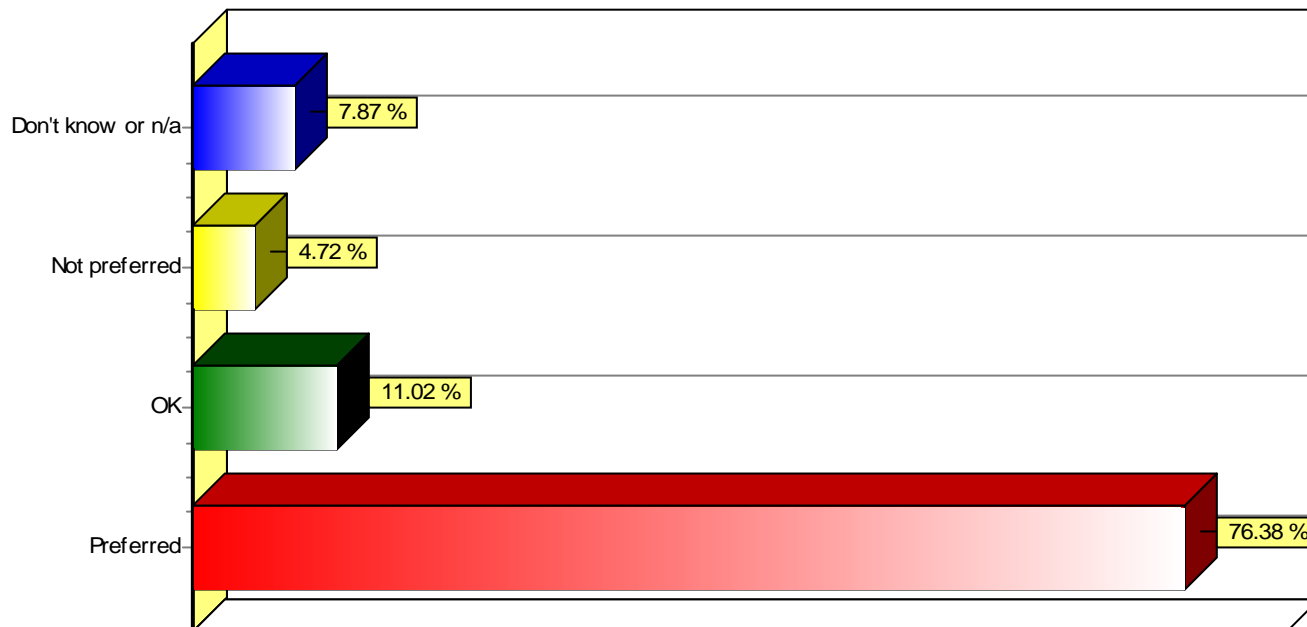


Table 1 Preferred Locations/Delivery Modes - WWW (Online)



# Bar Graphs

## Math Student

Table 1 Preferred Locations/Delivery Modes - Hybrid Class (part in classroom/part online)

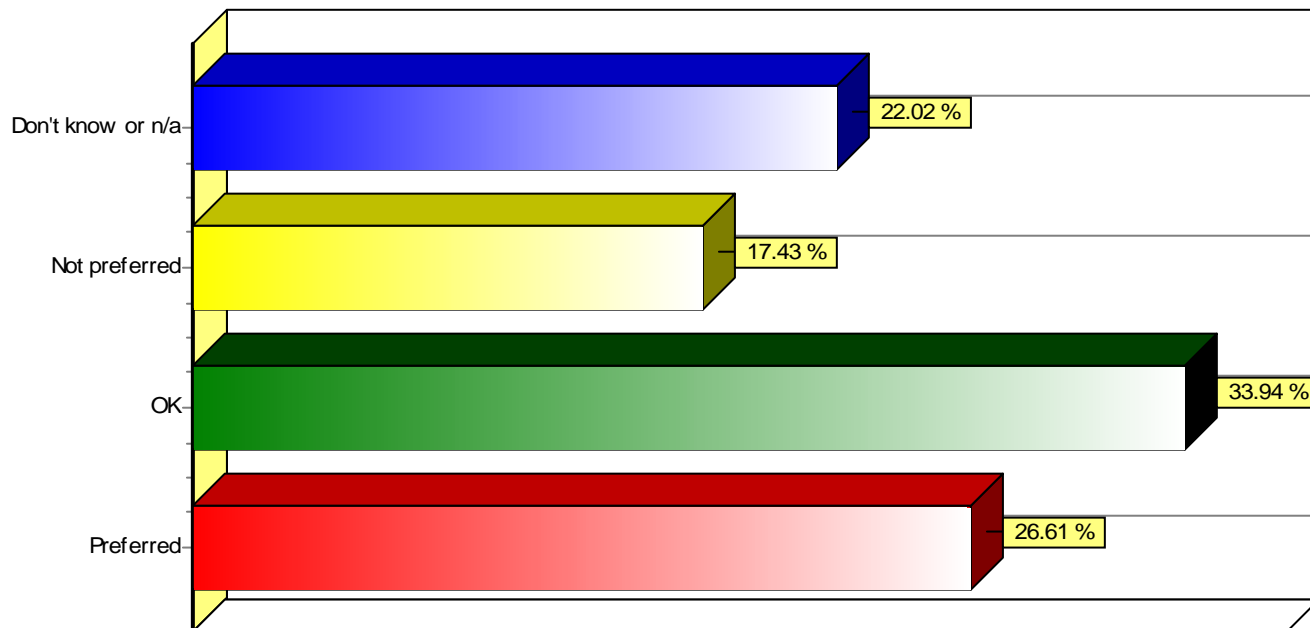
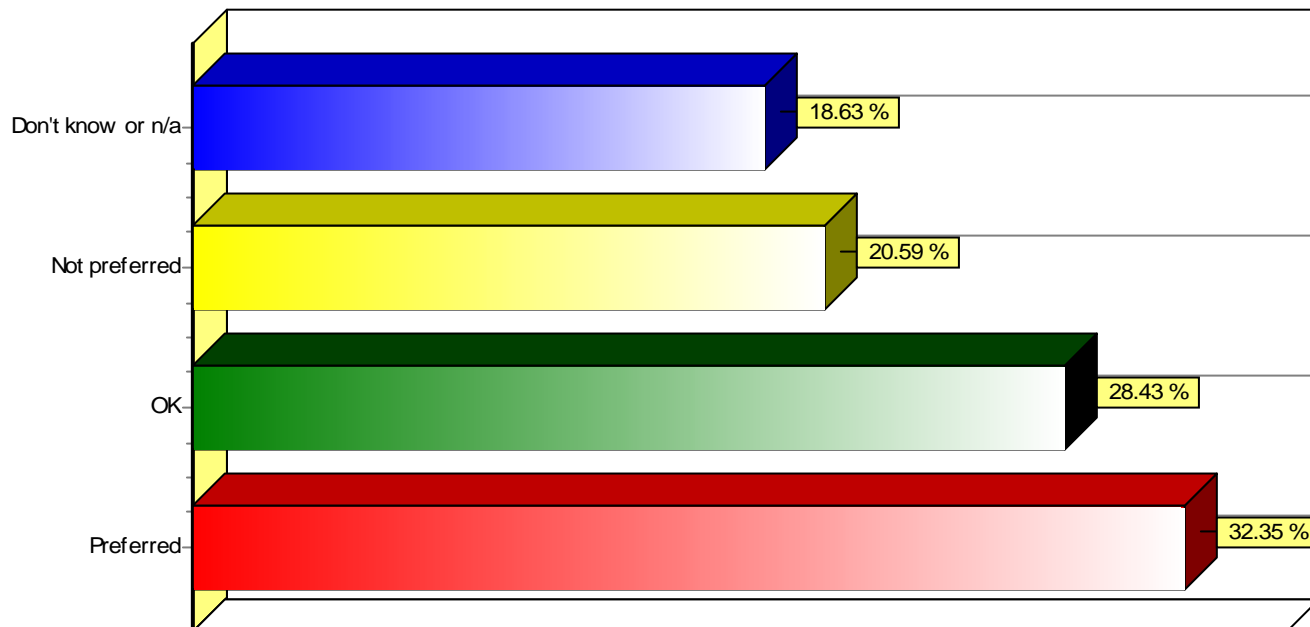


Table 1 Preferred Locations/Delivery Modes - Telecourse or Cable





# Bar Graphs

## Math Student

Table 2 General Satisfaction - Quality of instruction

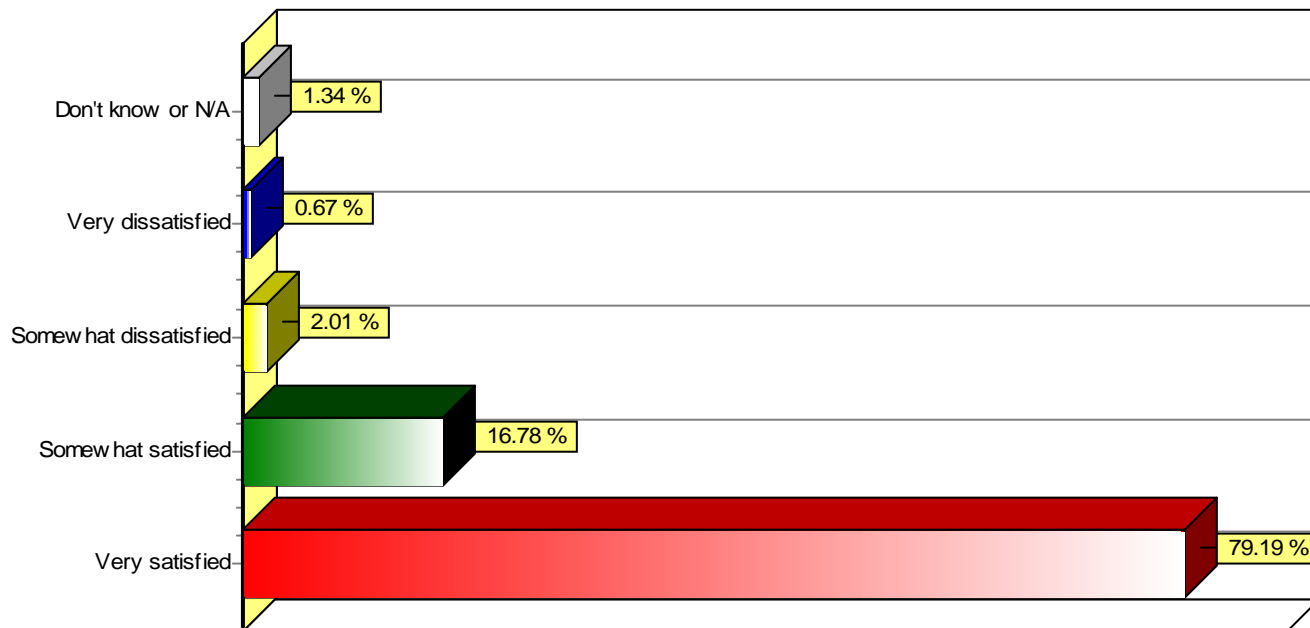
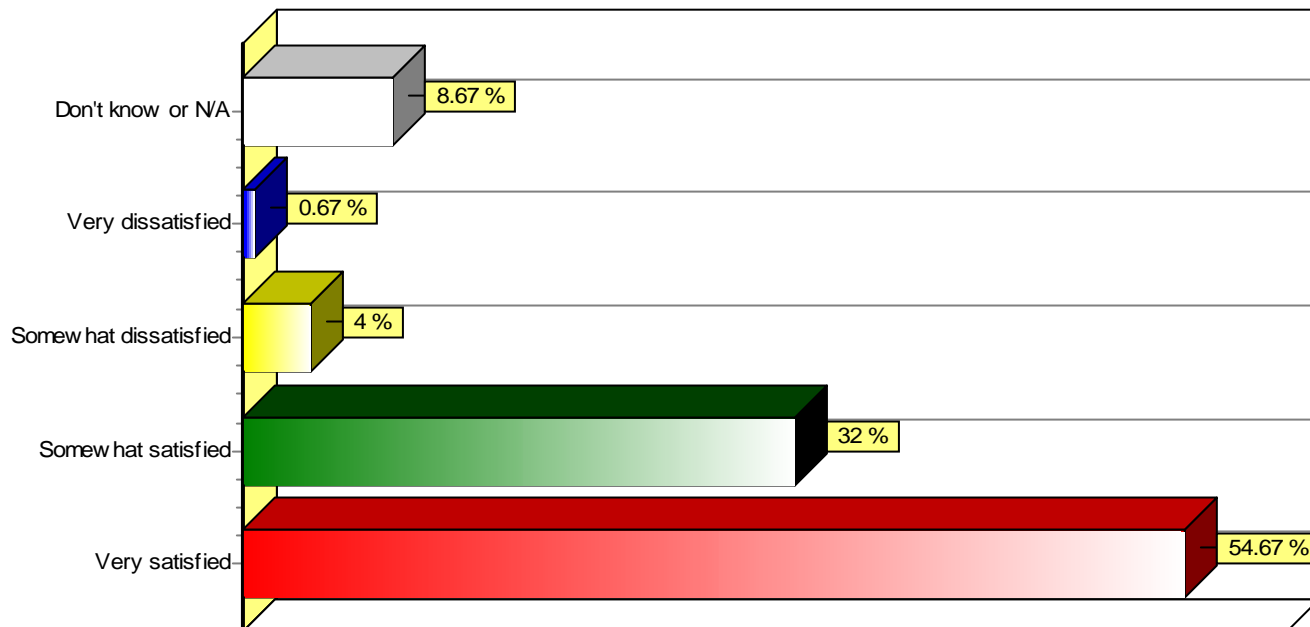


Table 2 General Satisfaction - Variety of classes



# Bar Graphs

## Math Student

Table 2 General Satisfaction - Adequacy of instructional facilities

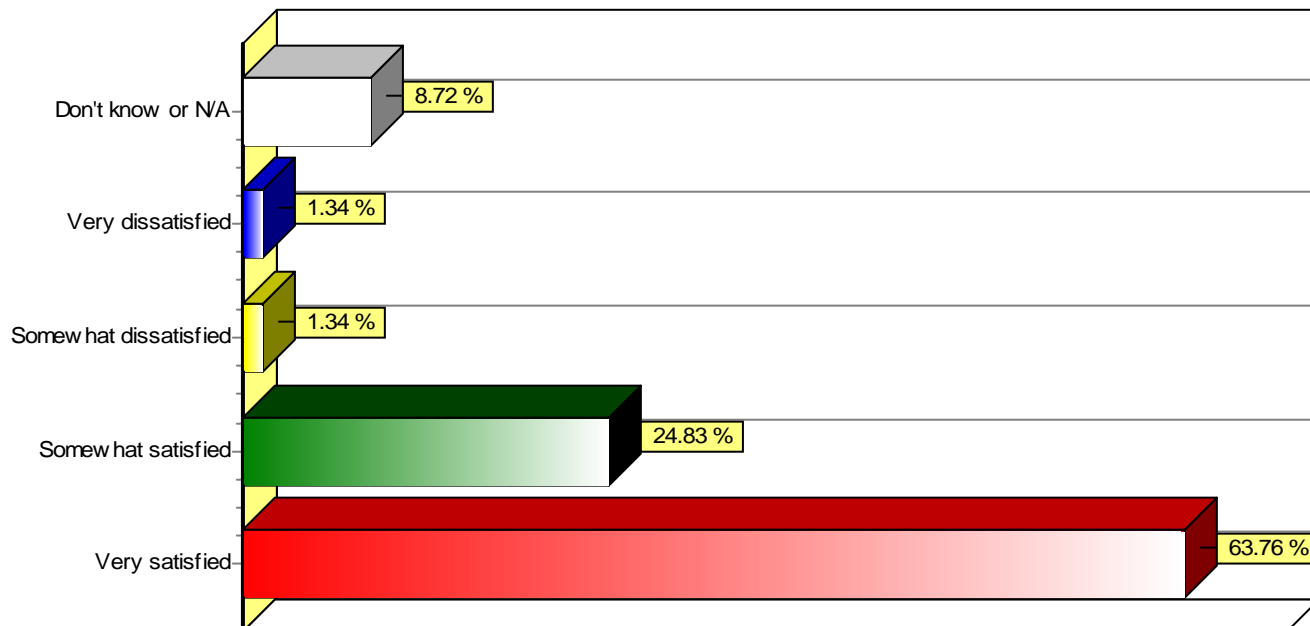
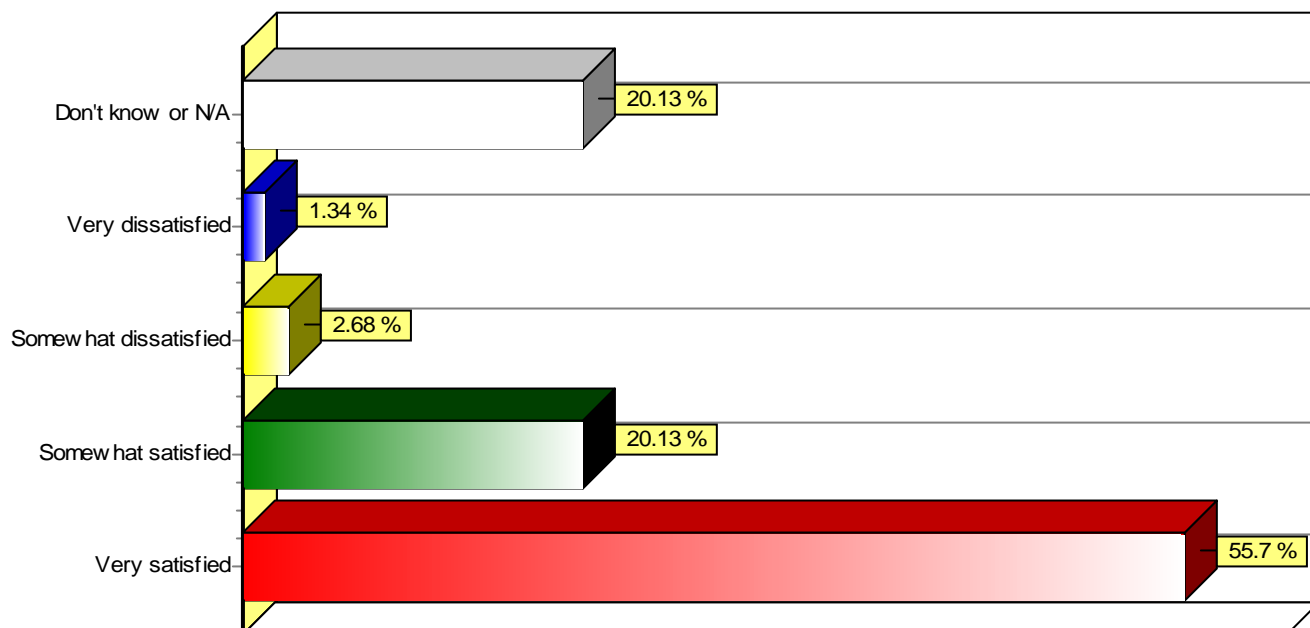


Table 2 General Satisfaction - Quality of specialized equipment



# Bar Graphs

## Math Student

Table 2 General Satisfaction - Quality of general instructional equipment

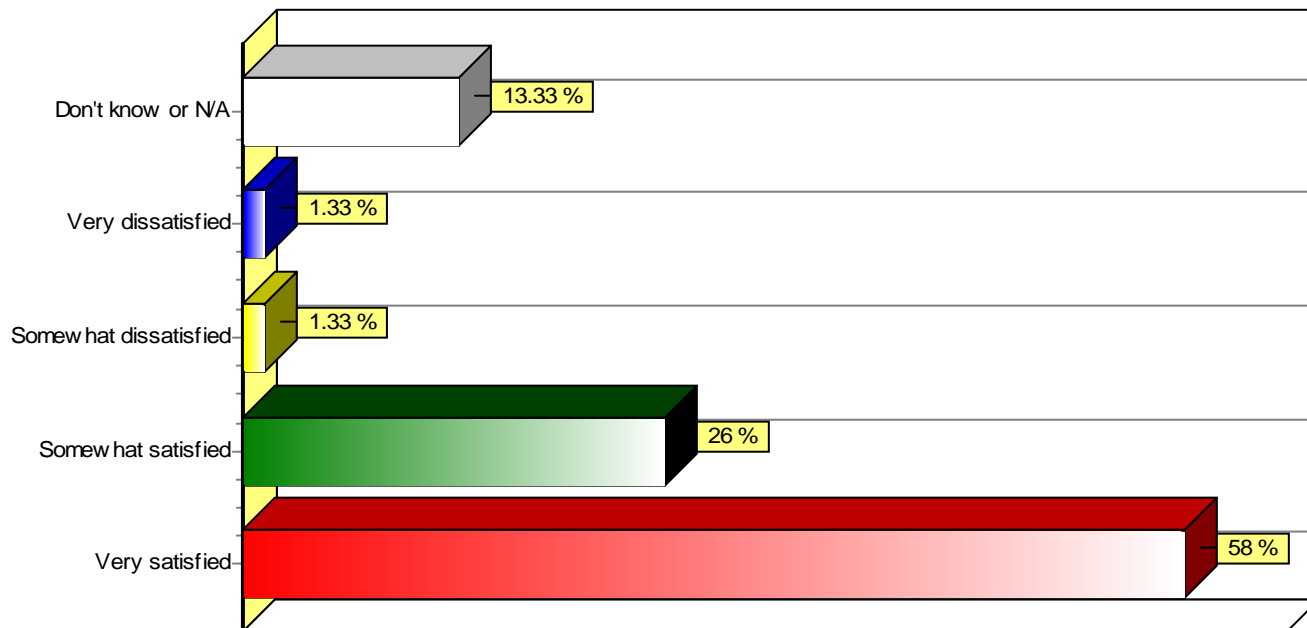
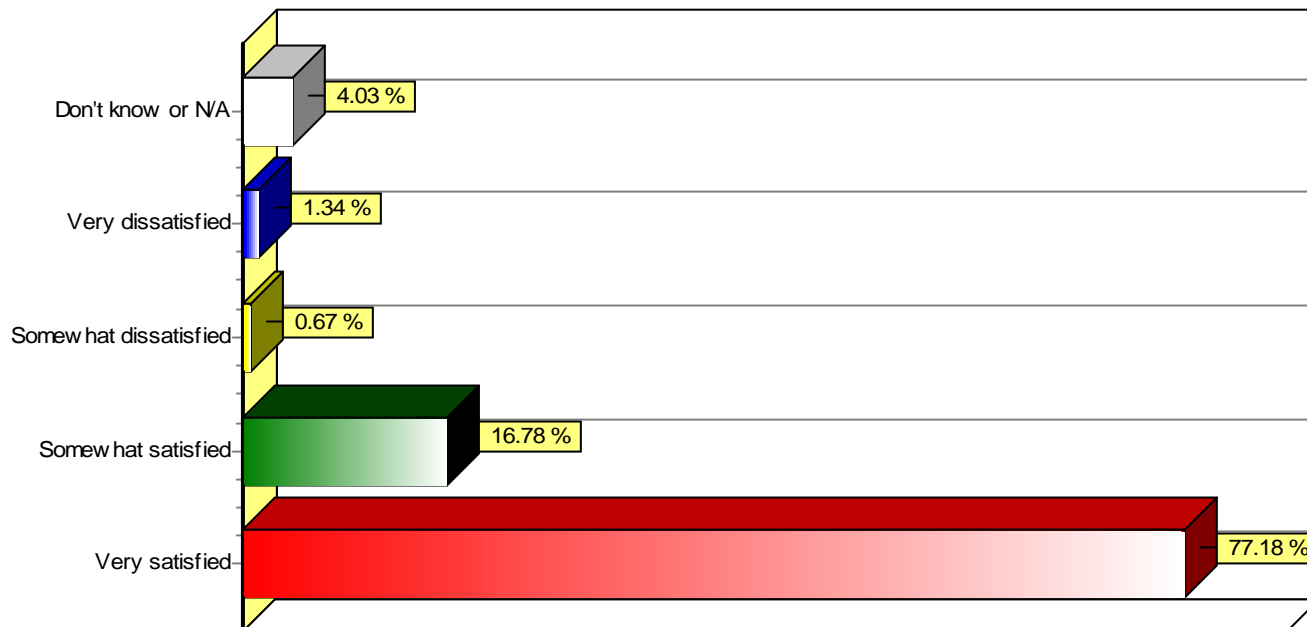


Table 2 General Satisfaction - Staff support for the program and classes



# Bar Graphs

## Math Student

Table 2 General Satisfaction - Extent to which faculty and staff meet the needs of culturally diverse students

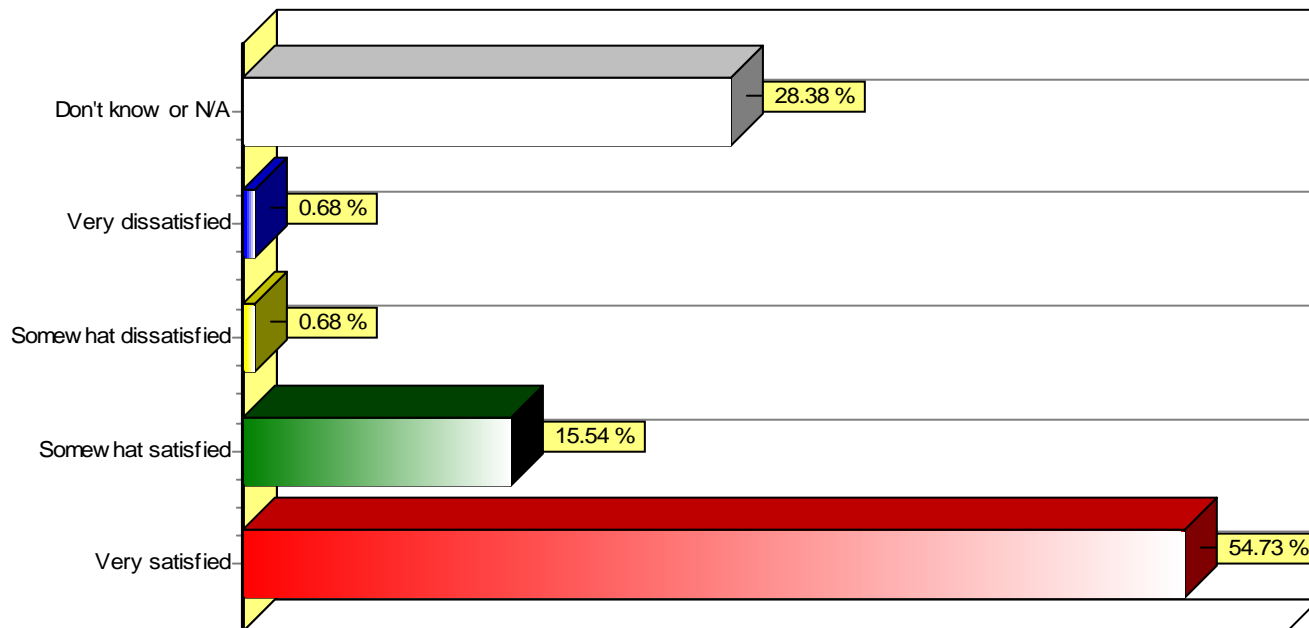
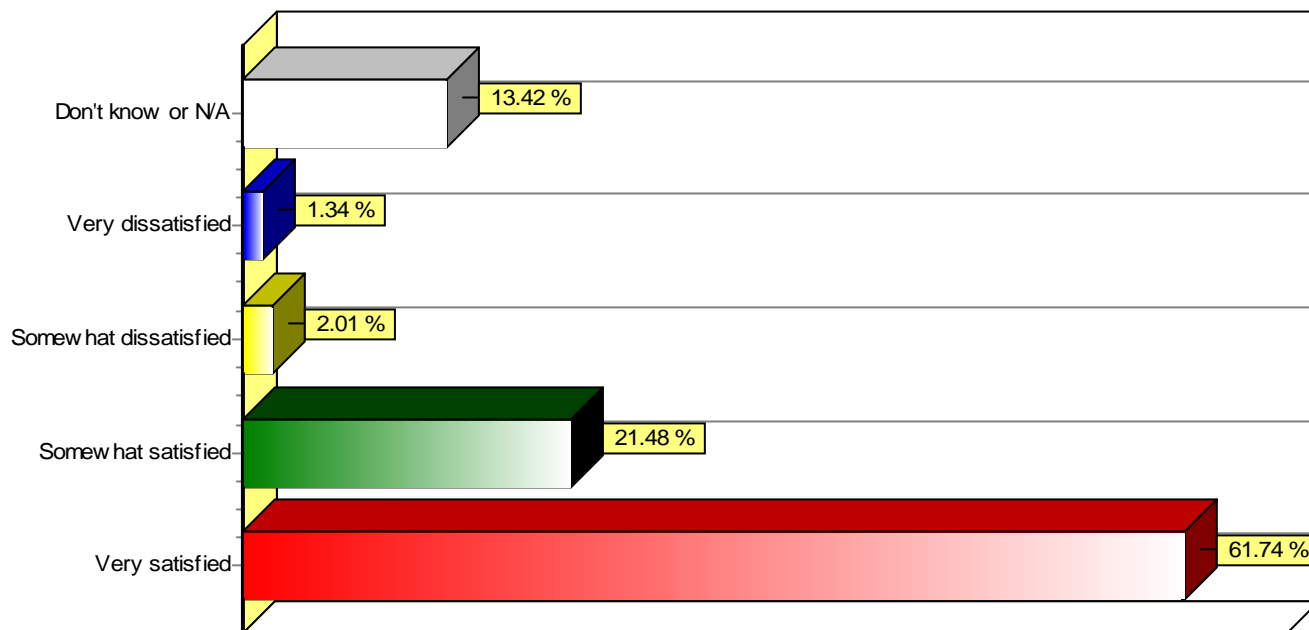


Table 2 General Satisfaction - Extent to which faculty and staff meet the needs of non-traditional students (e.g., older adults, working adults, etc.)



# Bar Graphs

## Math Student

Table 2 General Satisfaction - Overall quality of the program

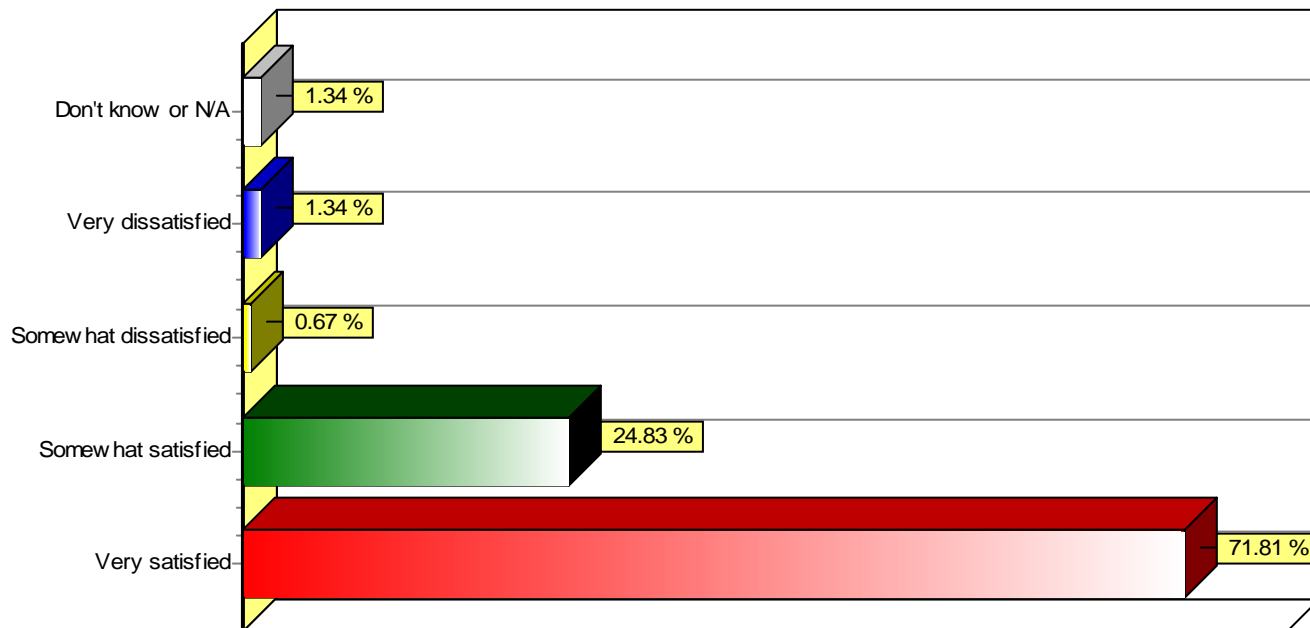
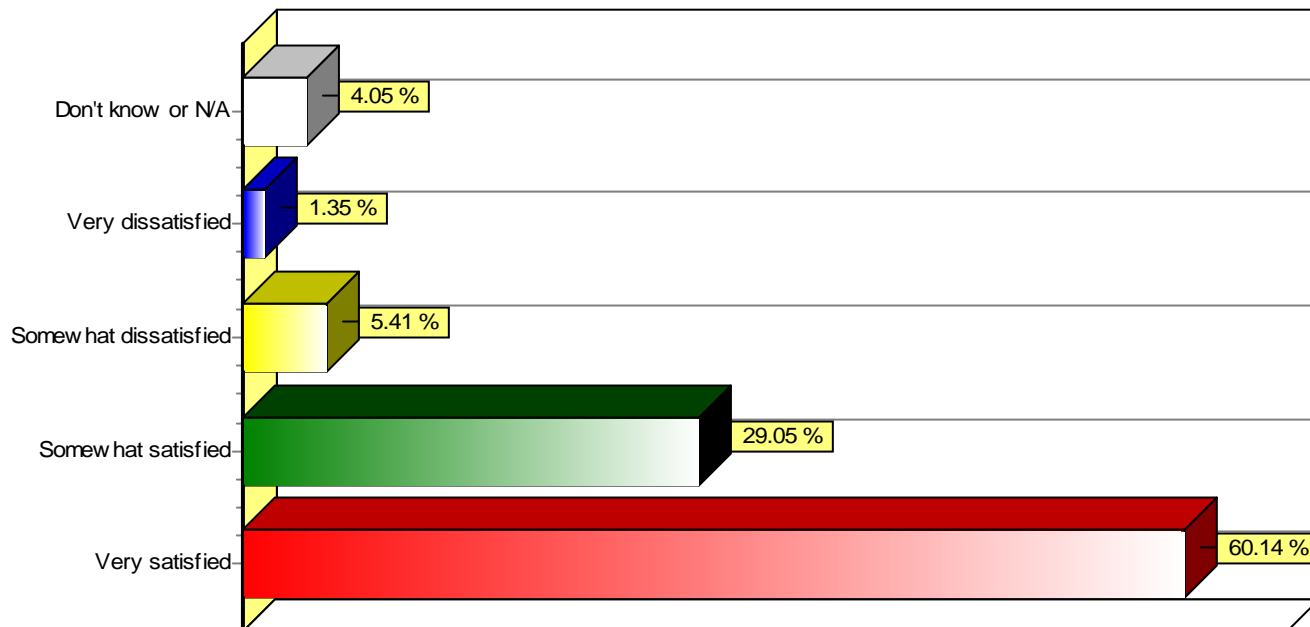


Table 2 General Satisfaction - Your own success in the program



# Bar Graphs

## Math Student

Table 3 Distance Learning - Overall, the caliber of my distance learning math course at Coastline is equivalent to or better than the quality of my classroom-based courses.

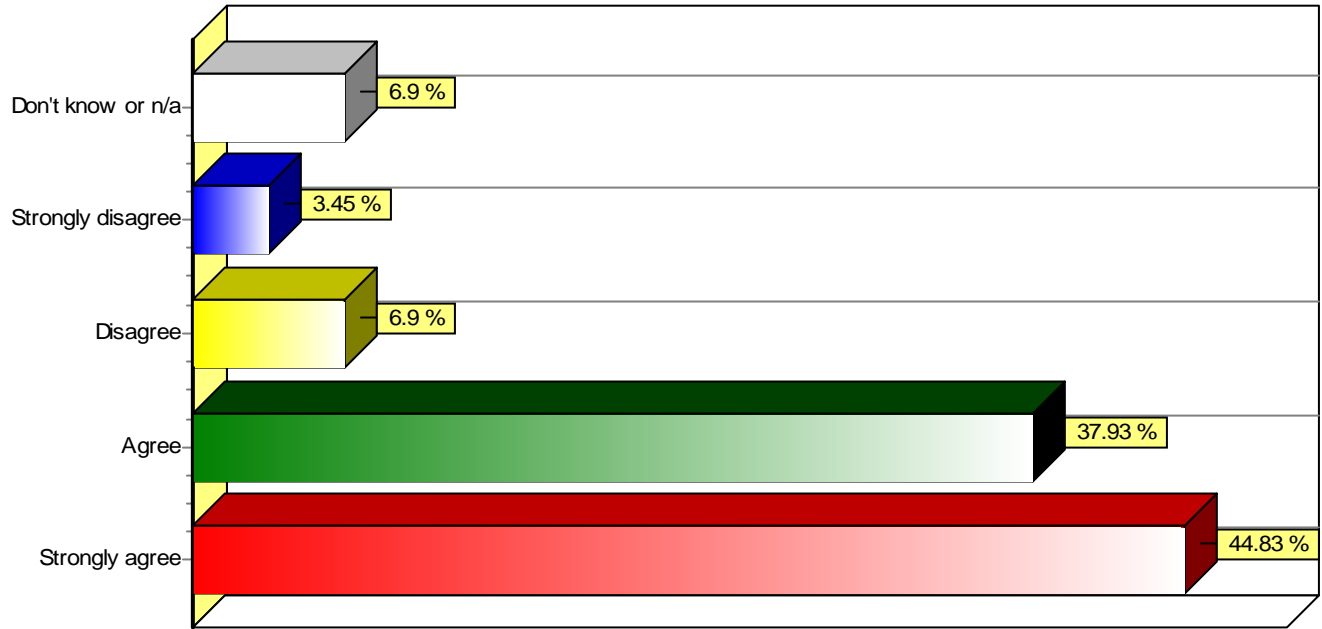
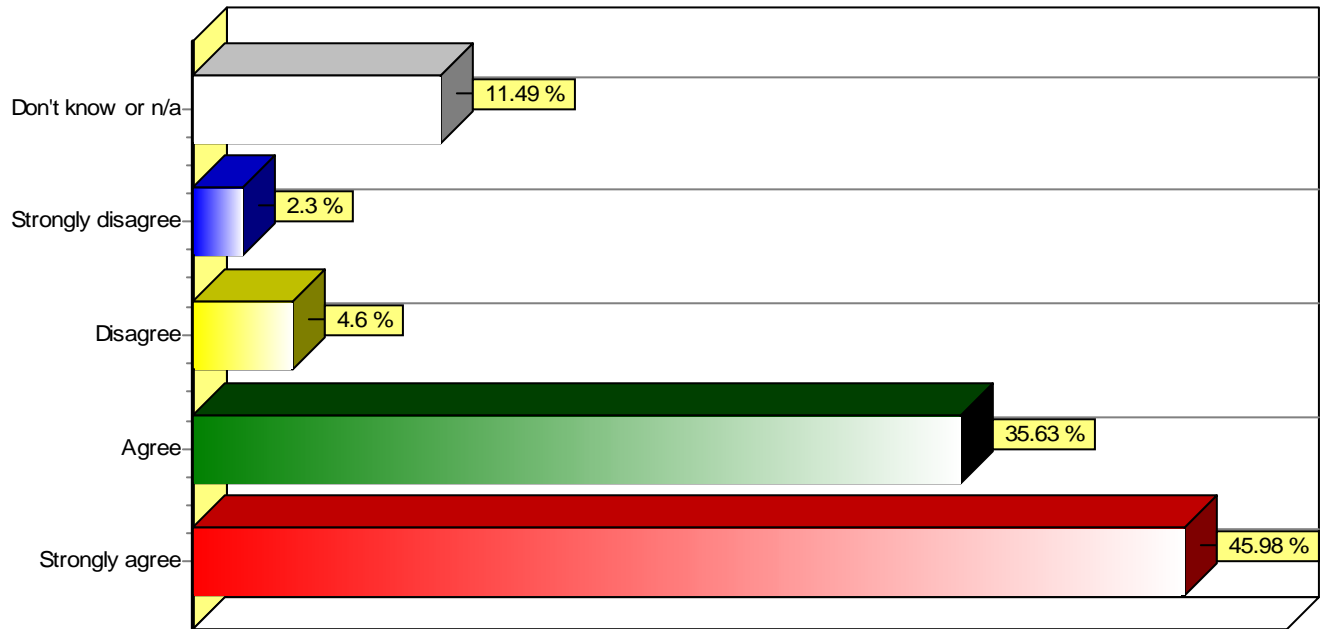


Table 3 Distance Learning - The caliber of the distance learning math courses at Coastline is equivalent to or better than the quality of other distance learning courses of which I am aware.



# Bar Graphs

## Math Student

Table 3 Distance Learning - I have as much or more interaction with the instructor in my distance learning math courses as I do with instructors in classroom-based courses.

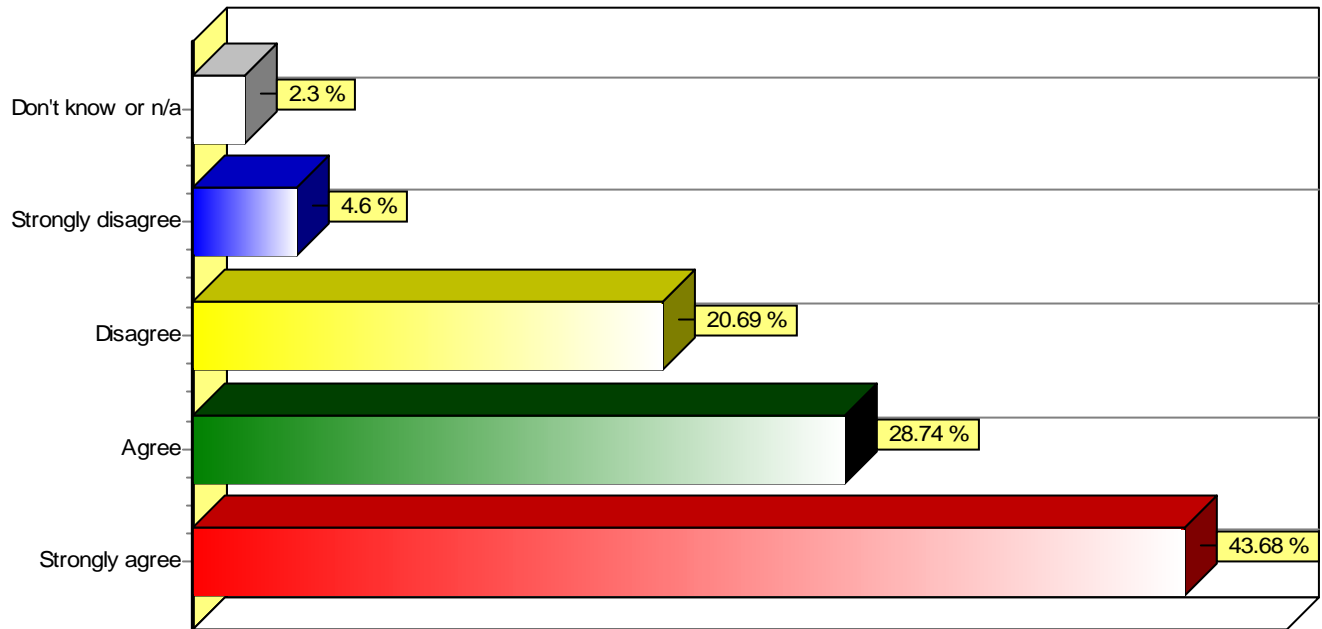
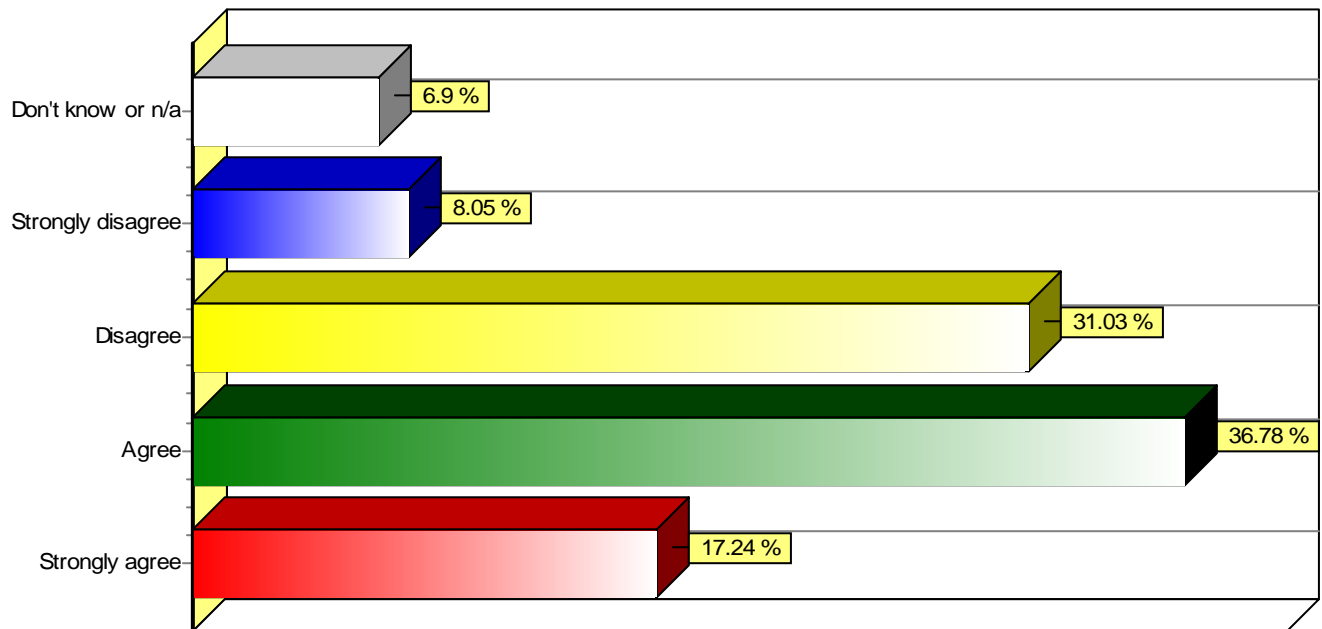


Table 3 Distance Learning - I have as much or more interaction with fellow students in my distance learning math courses as I do with students in classroom-based courses.



# Bar Graphs

## Math Student

Table 3 Distance Learning - I am satisfied with the amount of interaction I have with the instructor and with fellow students in my distance learning math class(es).

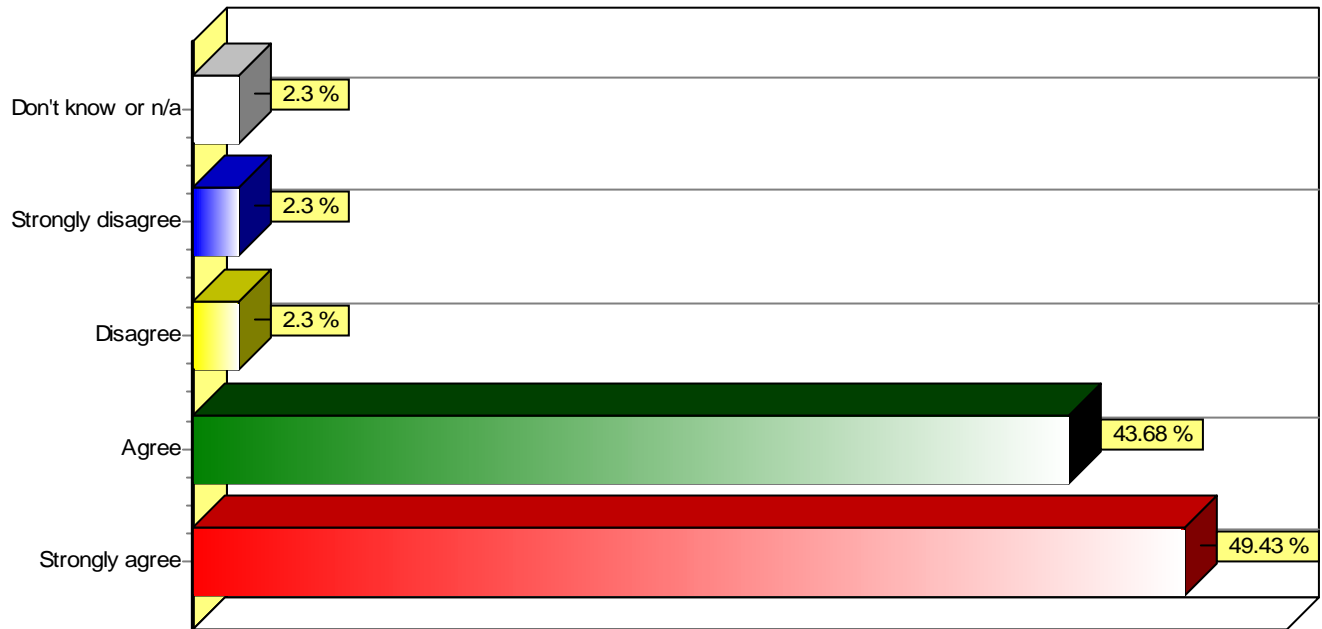
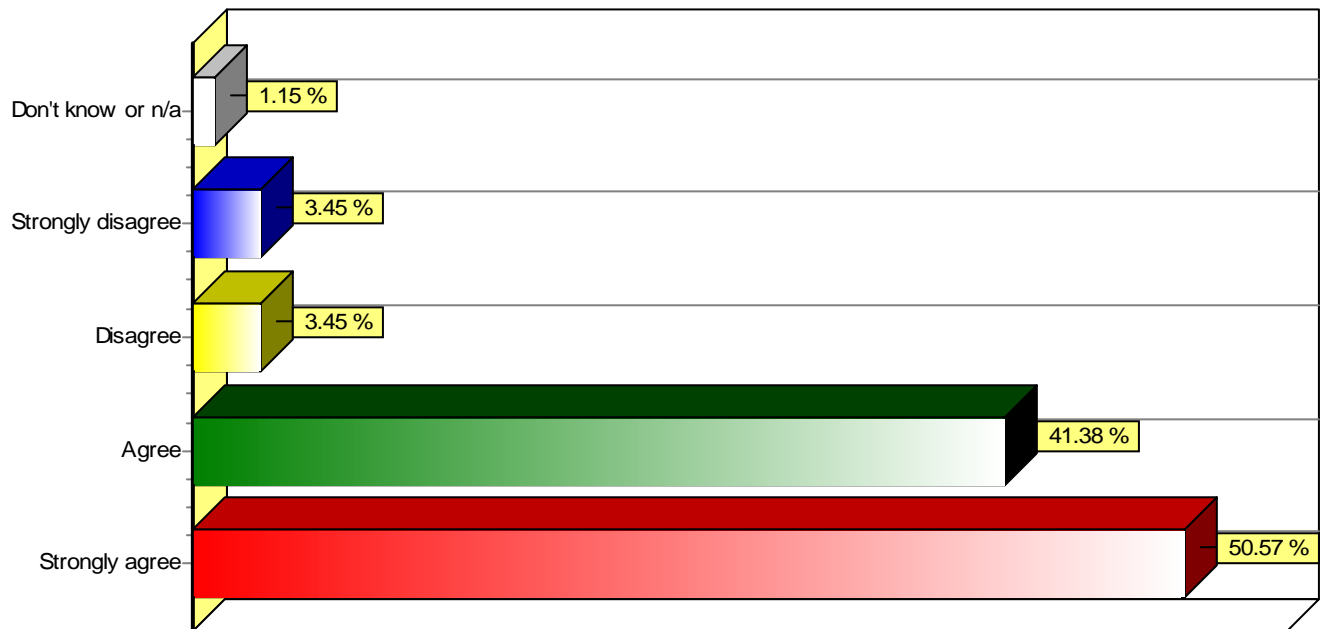


Table 3 Distance Learning - The technology used to deliver my distance learning math course(s) has been reliable.





# Bar Graphs

## Math Student

Table 3 Distance Learning - MyMathLab or Aleks Website was easy to navigate.

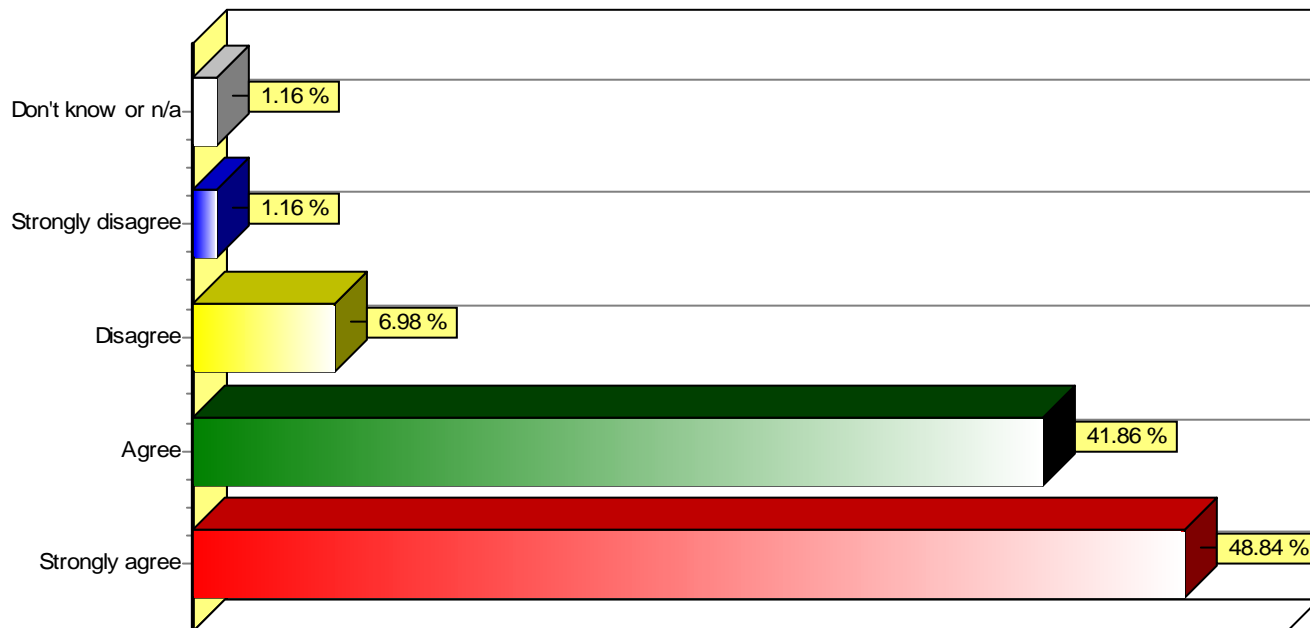
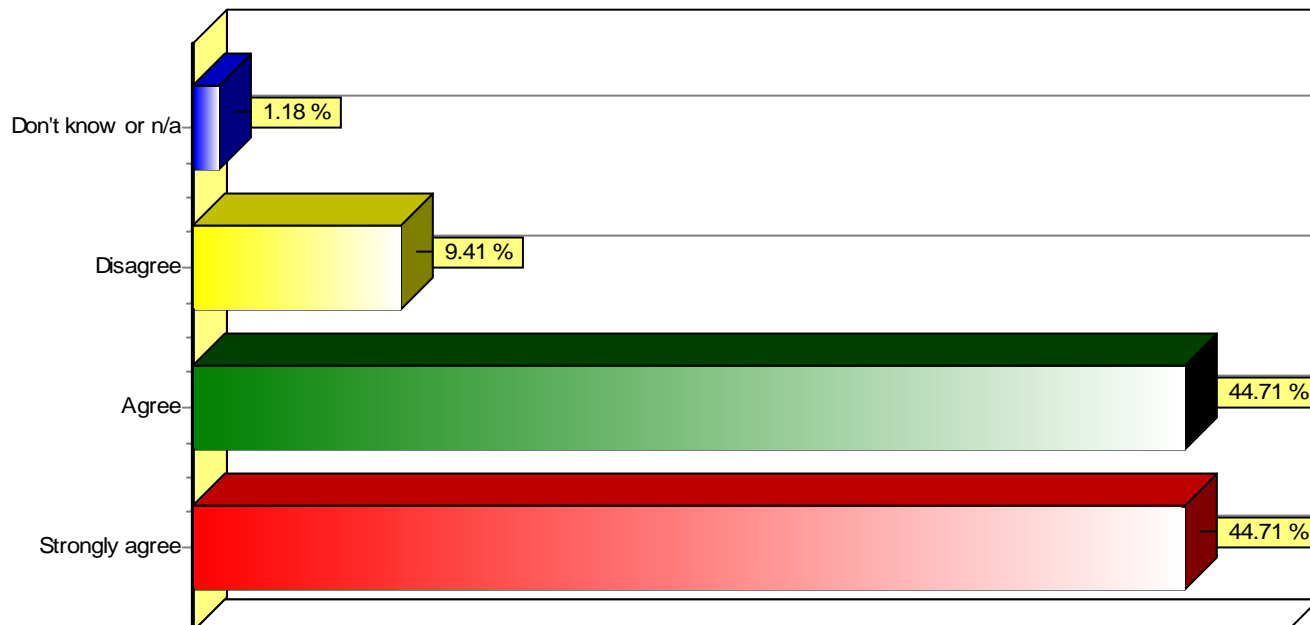


Table 3 Distance Learning - Modules were easy to find on the MyMathLab or Aleks Website.



# Bar Graphs

## Math Student

Table 3 Distance Learning - MyMathLab or Aleks assignments were clear.

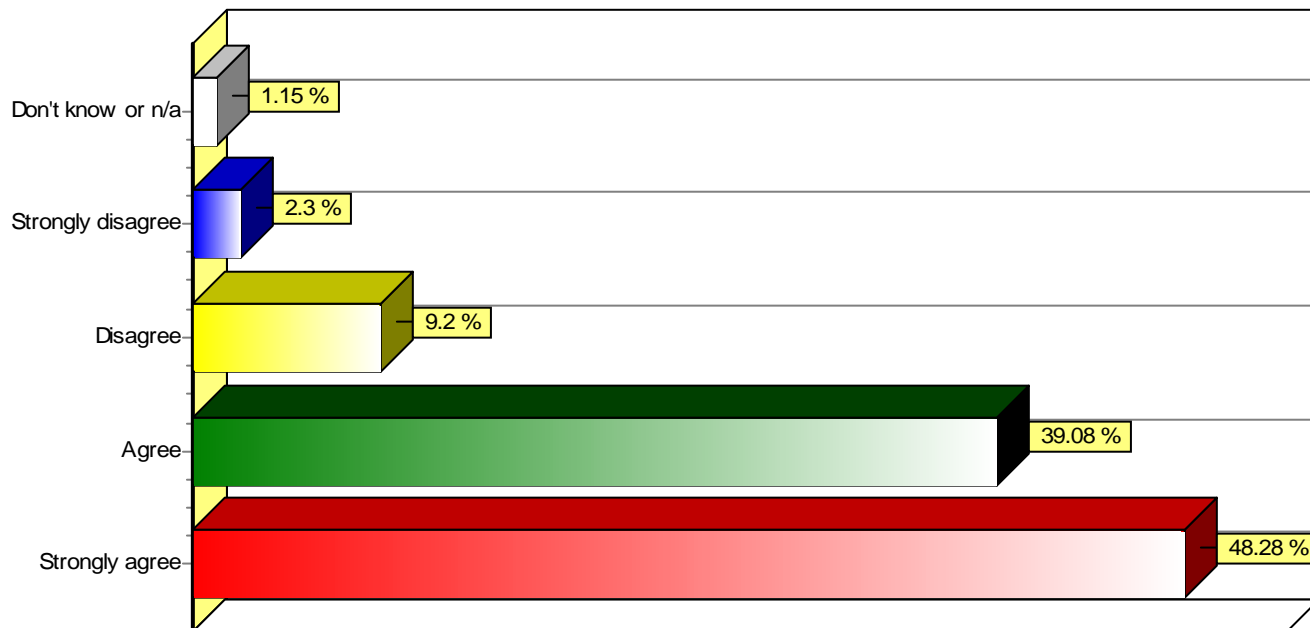
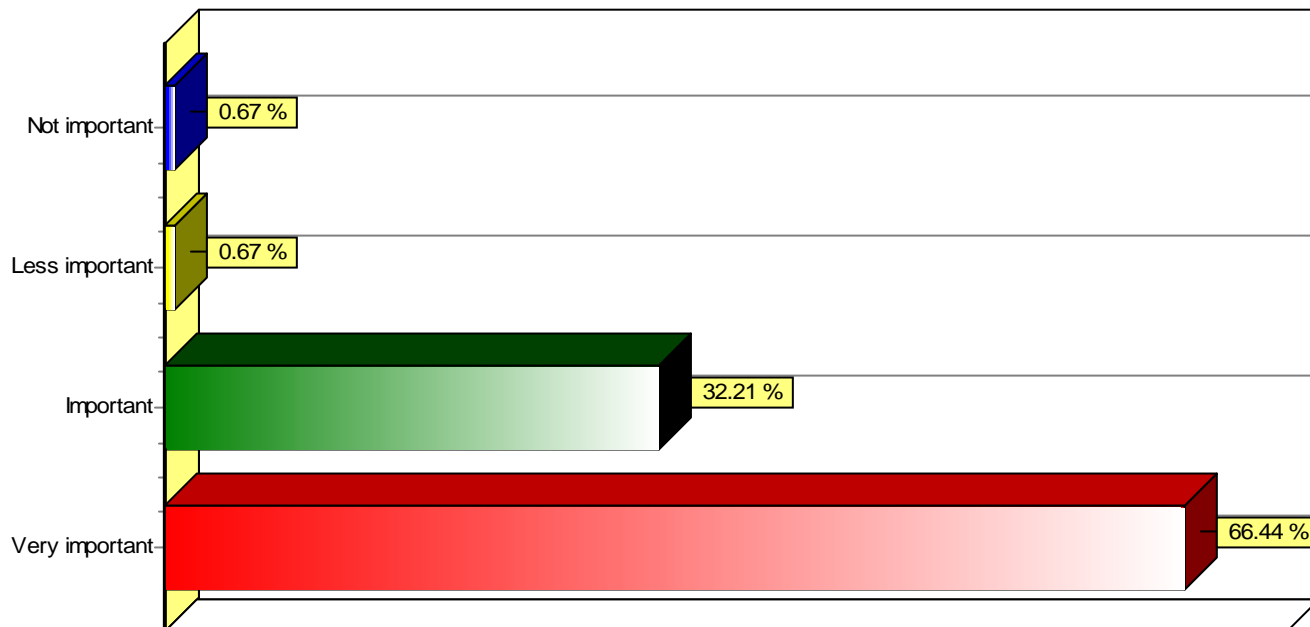


Table 4 Importance of Specific SLOs - Perform basic consumer-type math skills



# Bar Graphs

## Math Student

Table 4 Importance of Specific SLOs - Use basic math in your work setting

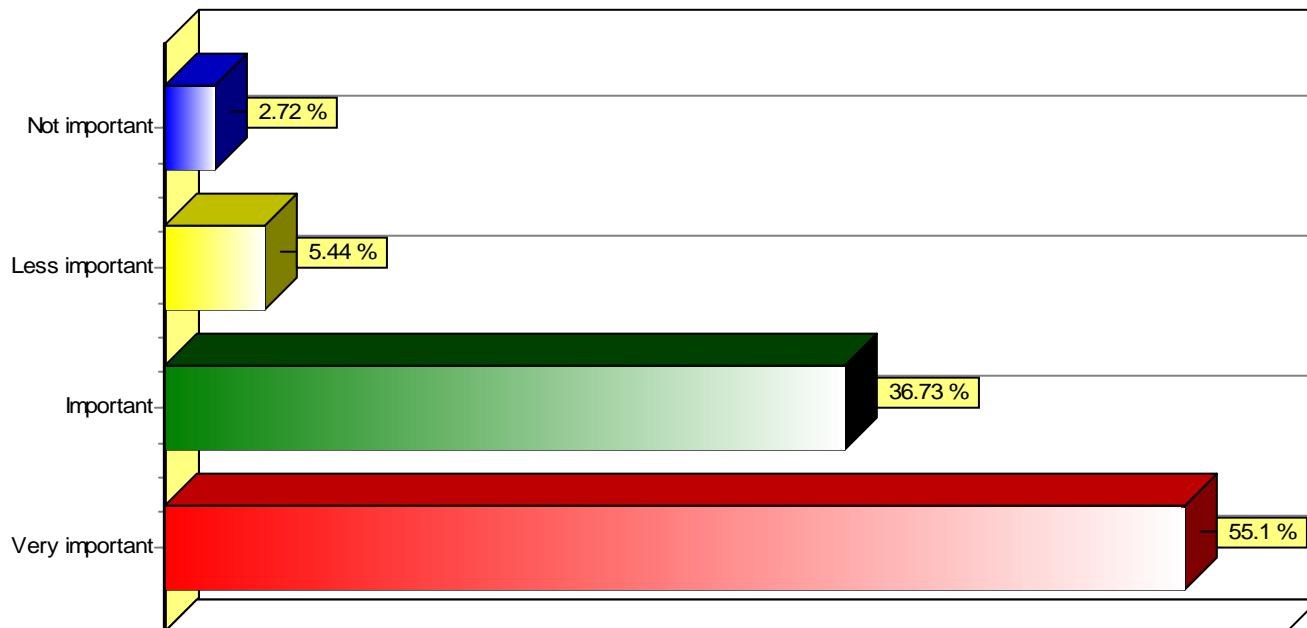
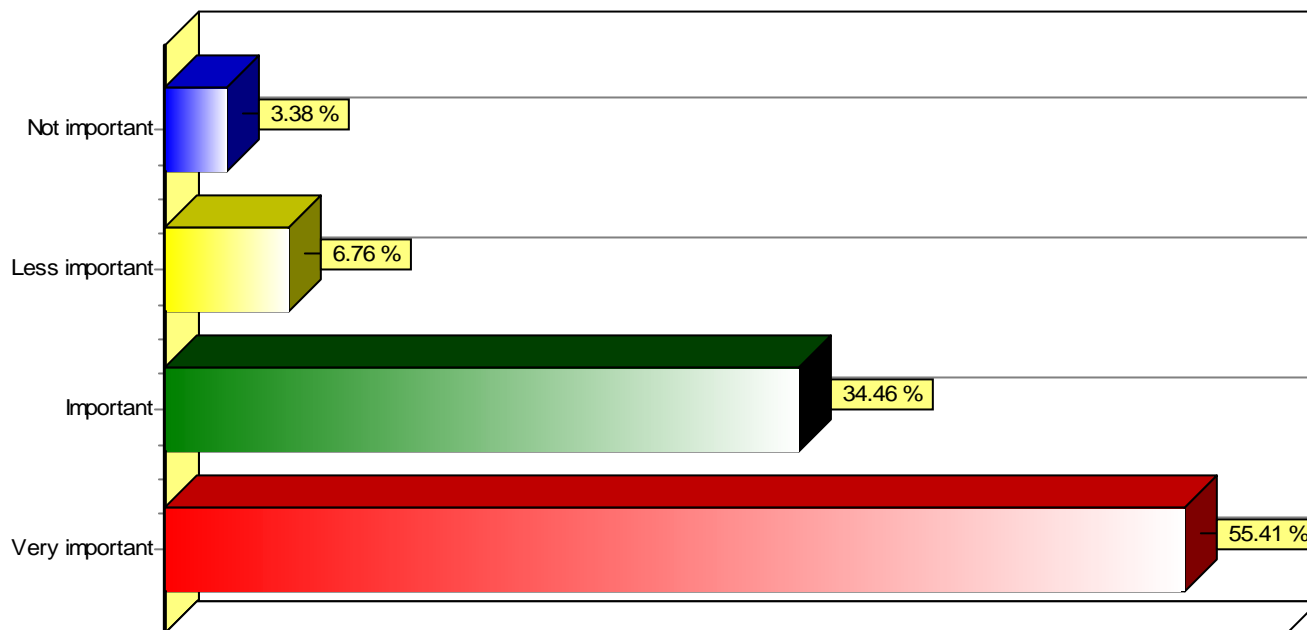


Table 4 Importance of Specific SLOs - Make informed purchasing choices based on an understanding of interest rates



# Bar Graphs

## Math Student

Table 4 Importance of Specific SLOs - Develop quantitative reasoning skills for my non-math classes

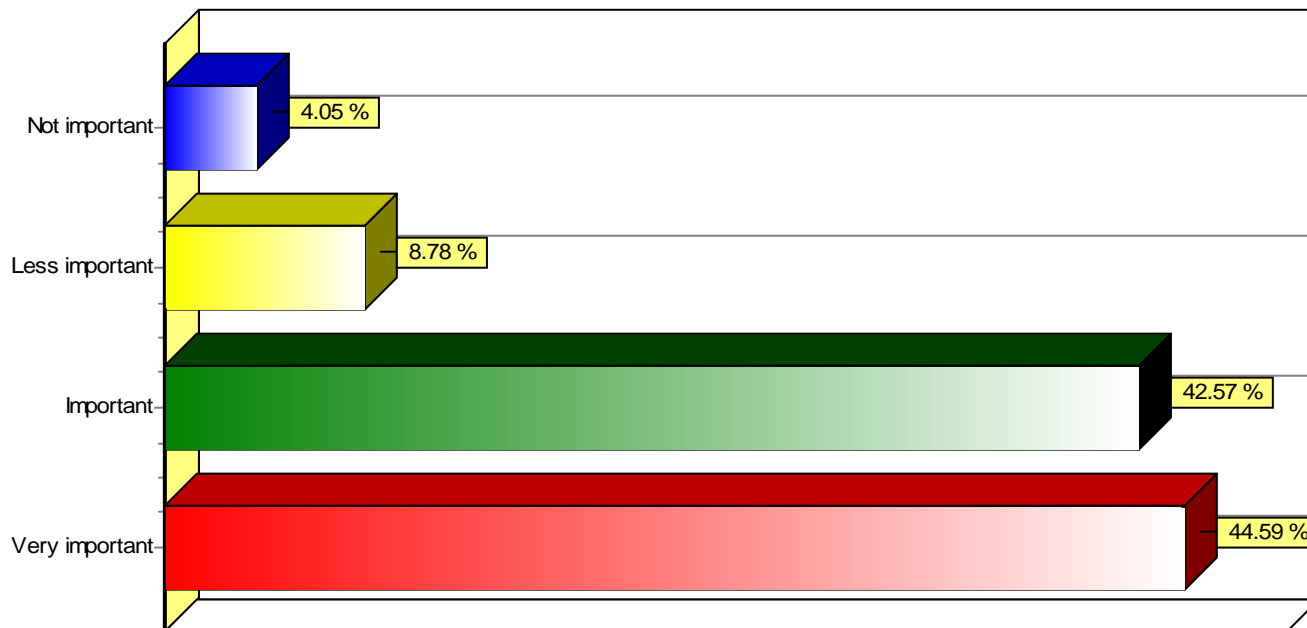
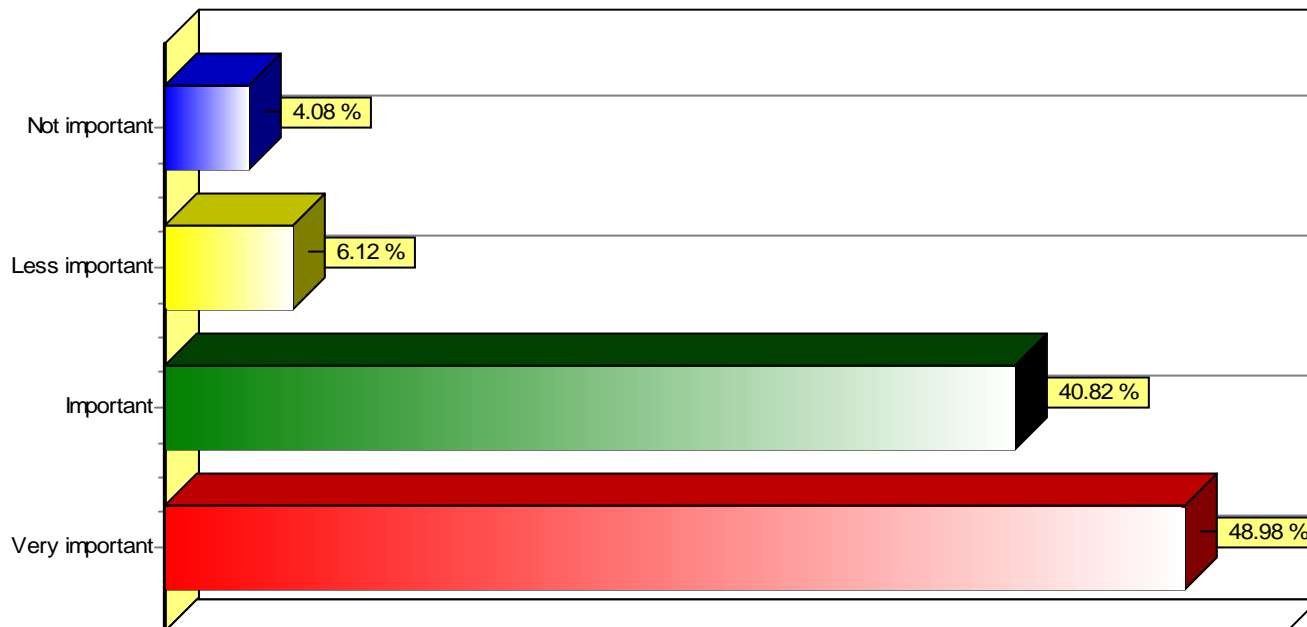


Table 4 Importance of Specific SLOs - Develop quantitative reasoning skills for my work and career



# Bar Graphs

## Math Student

Table 4 Importance of Specific SLOs - Apply quantitative reasoning skills to life issues (e.g., voting responsibly, understanding the media)

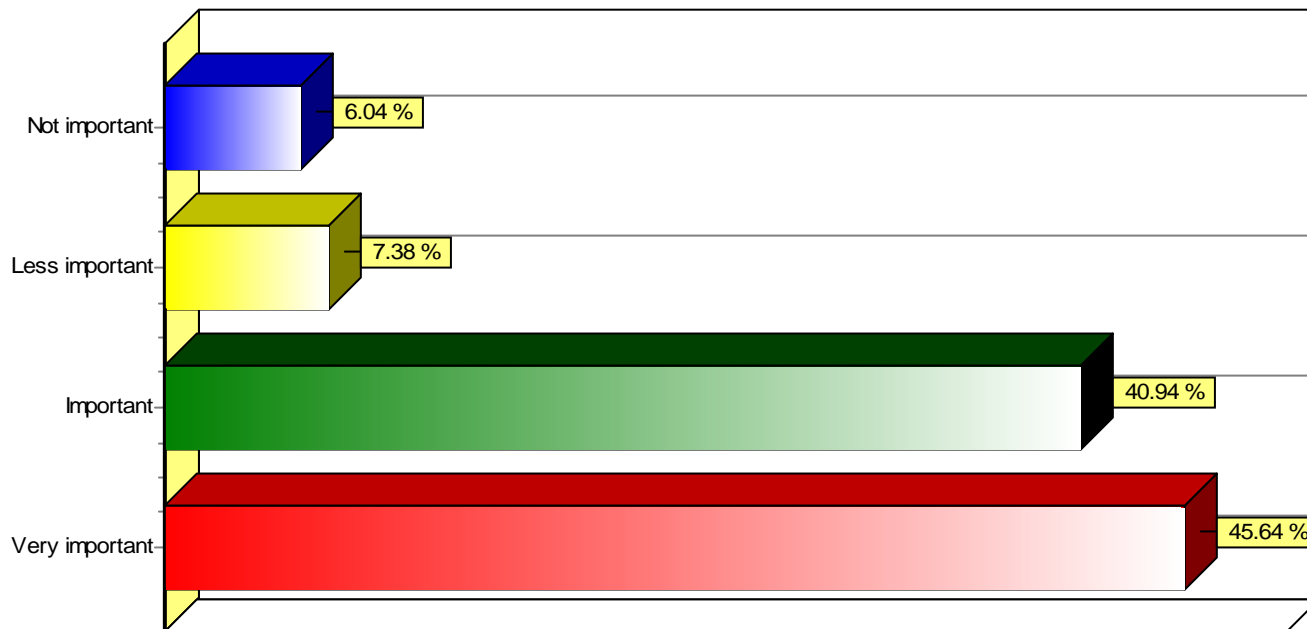
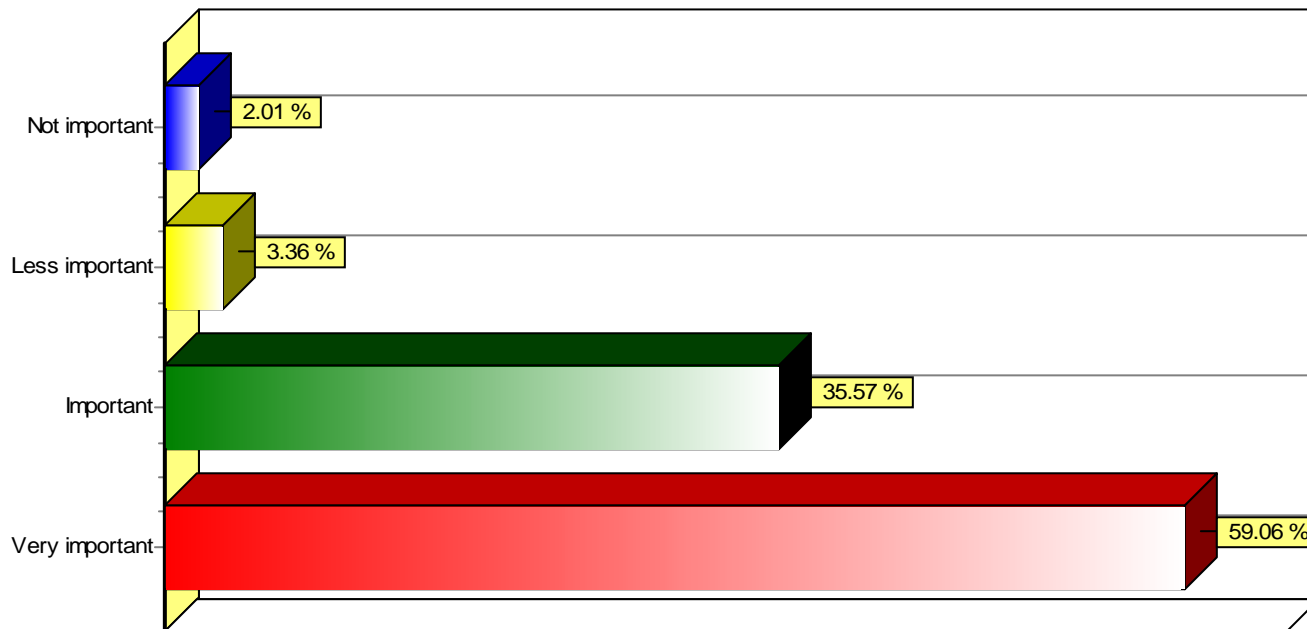


Table 4 Importance of Specific SLOs - Use quantitative reasoning skills to make intelligent consumer choices (e.g., selecting a home mortgage or insurance plan)



# Bar Graphs

## Math Student

Table 4 Importance of Specific SLOs - Use math formulas within an Excel spreadsheet

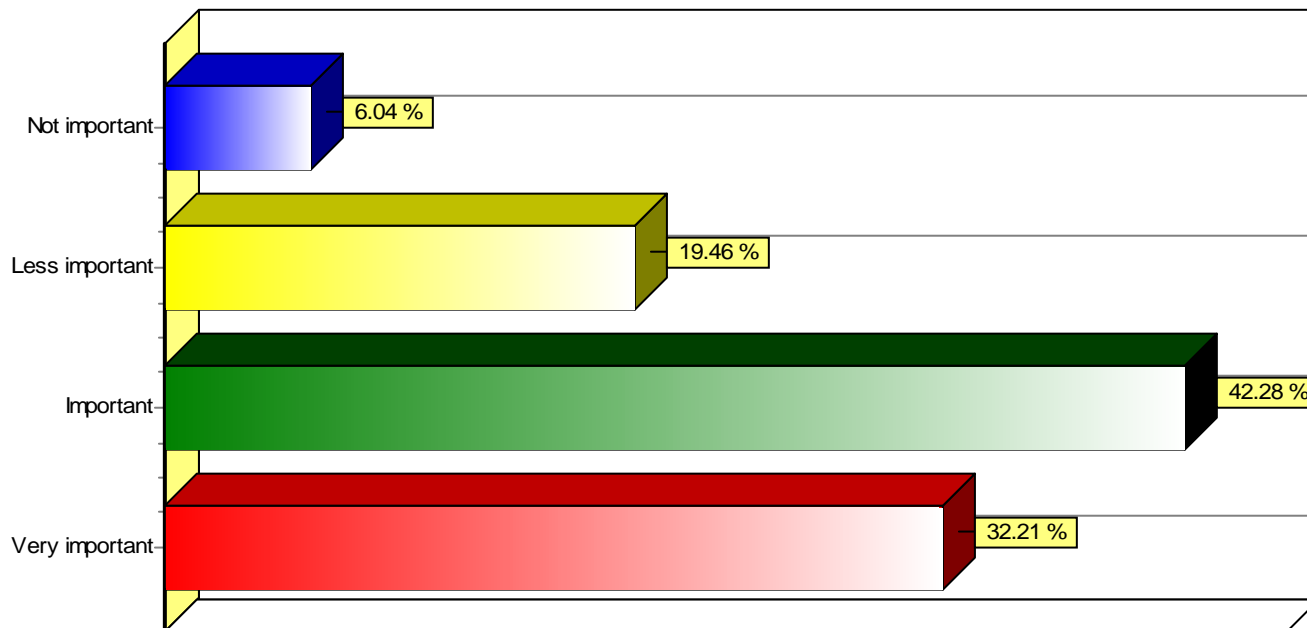
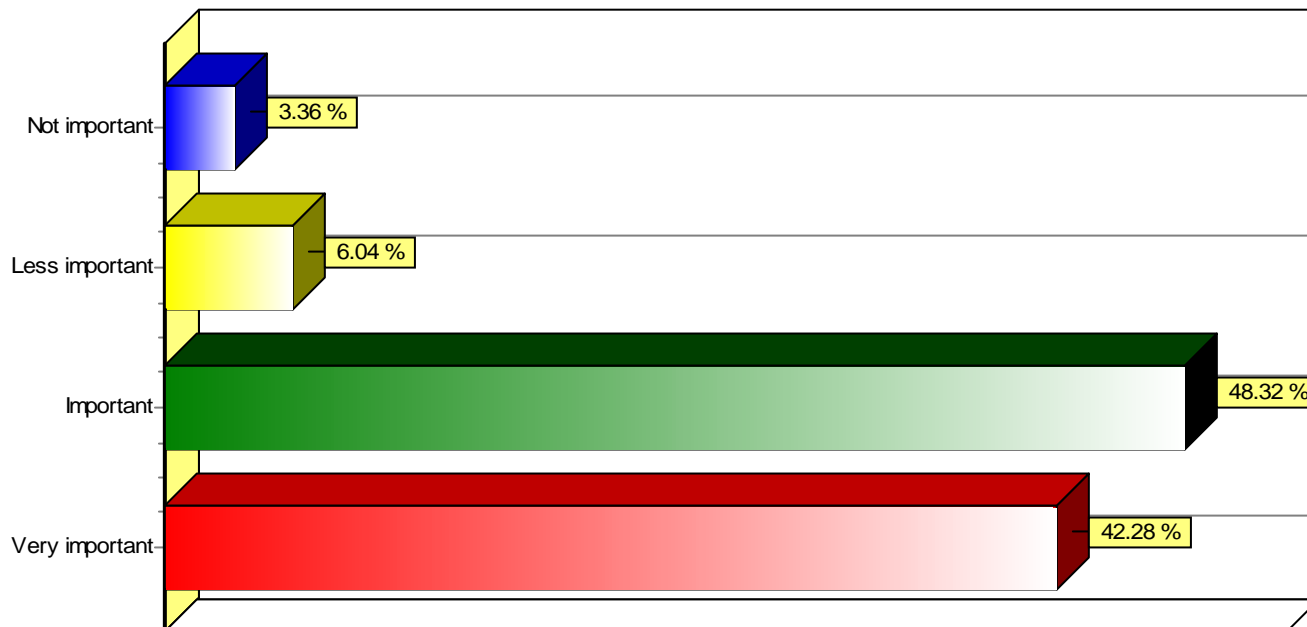


Table 4 Importance of Specific SLOs - Solve math problems presented in numerals

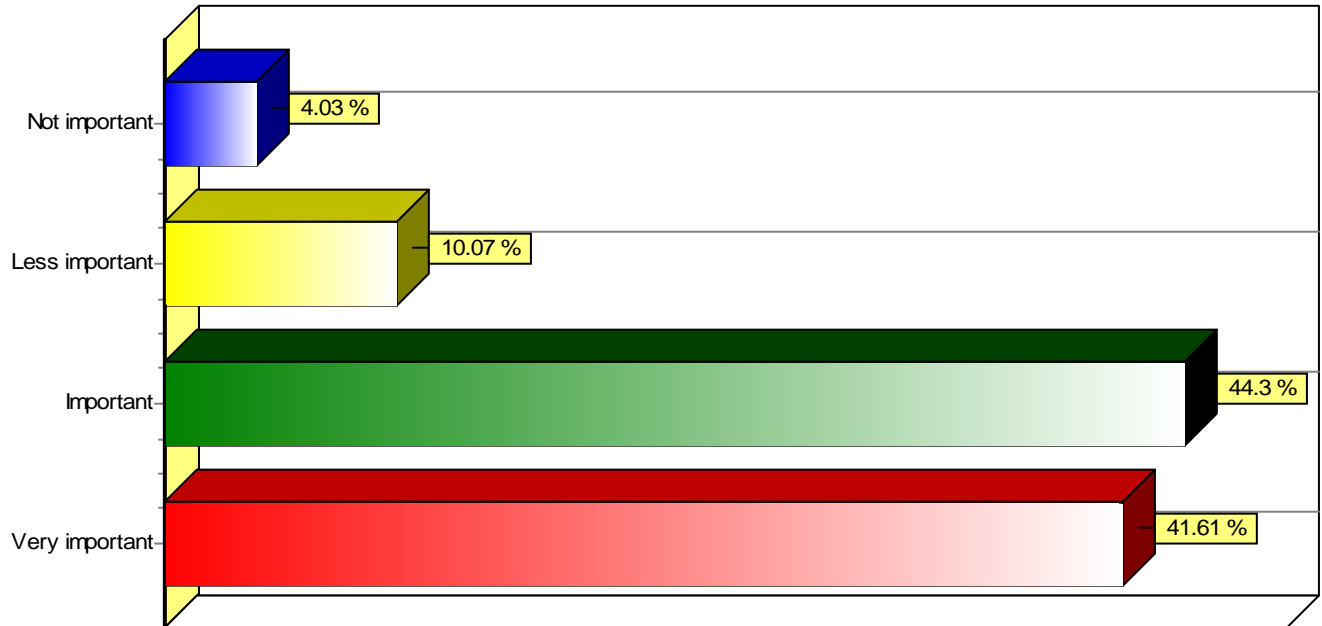


# Bar Graphs

## Math Student

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Table 4 Importance of Specific SLOs - Solve math problems presented as word problems

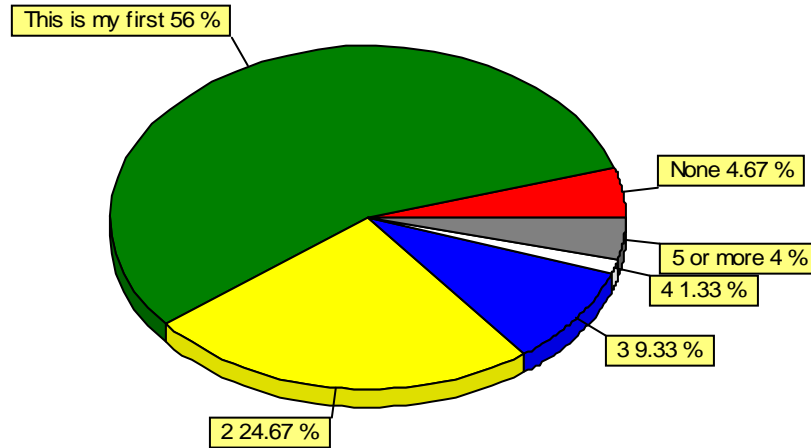


# Pie Charts

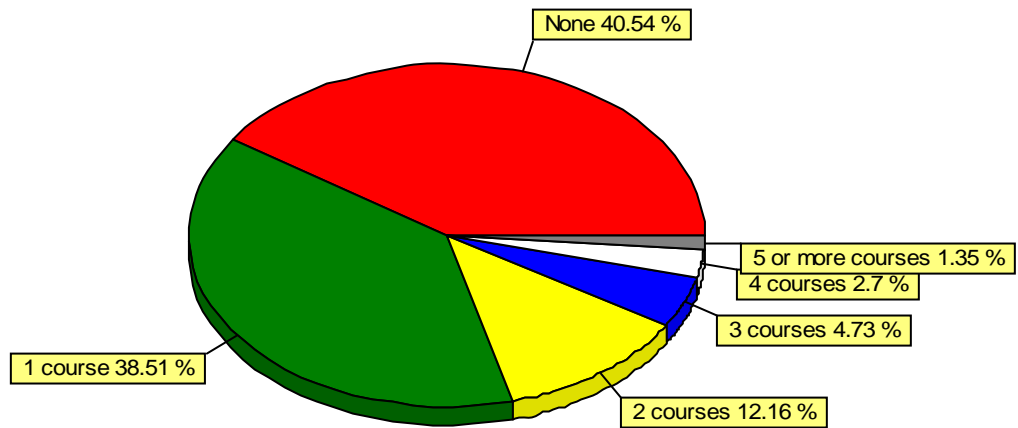
## Math Student

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How many math courses have you taken at Coastline?



How many Coastline math courses have you taken through distance learning?



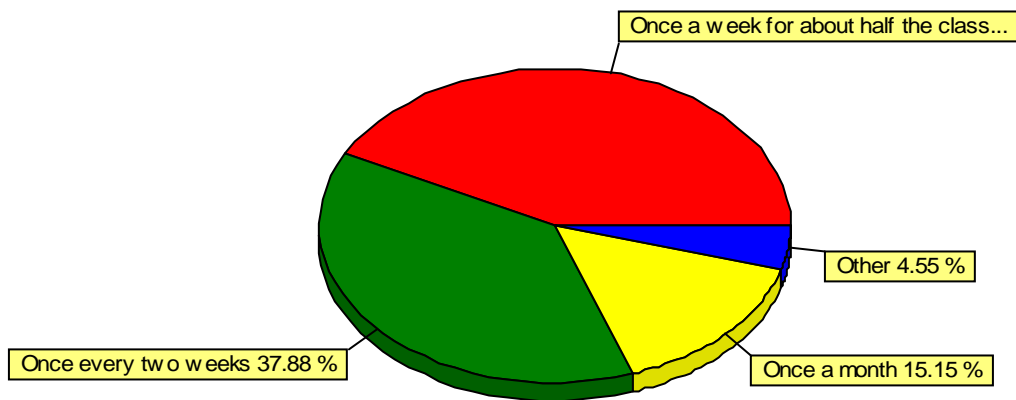


# Pie Charts

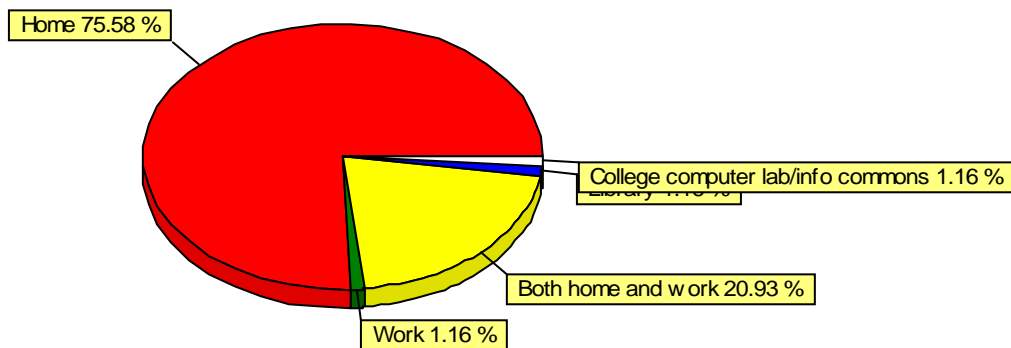
## Math Student

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You indicated you may be interested in taking a hybrid math class that divides class time between classroom sessions and work and activities conducted online. If you took a hybrid class, how often would you want to meet in the classroom?



From what location do you usually access the Internet?

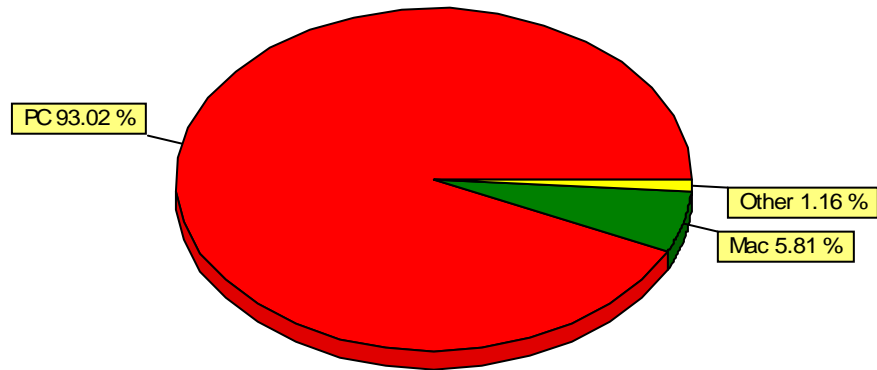


# Pie Charts

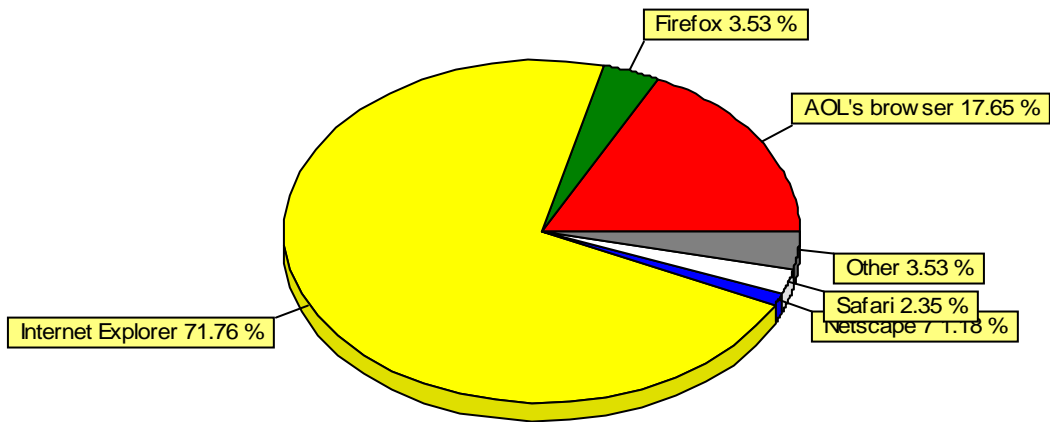
## Math Student

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What type of computer do you use most often to access the Internet?



What browser do you usually use when accessing the Internet?

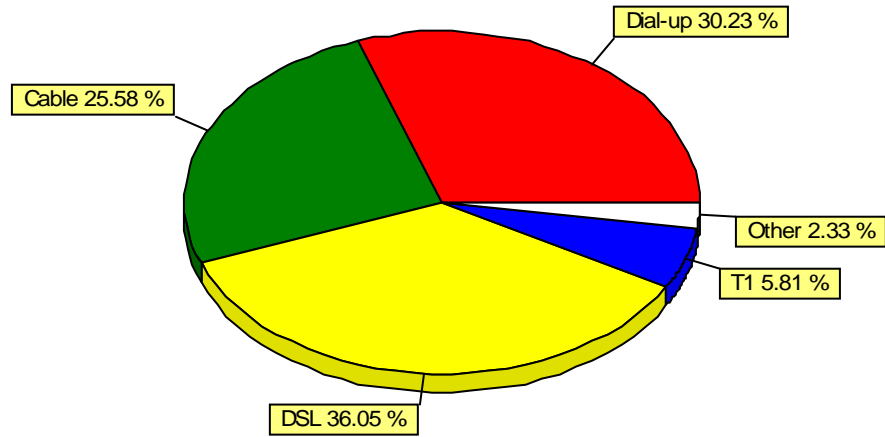


# Pie Charts

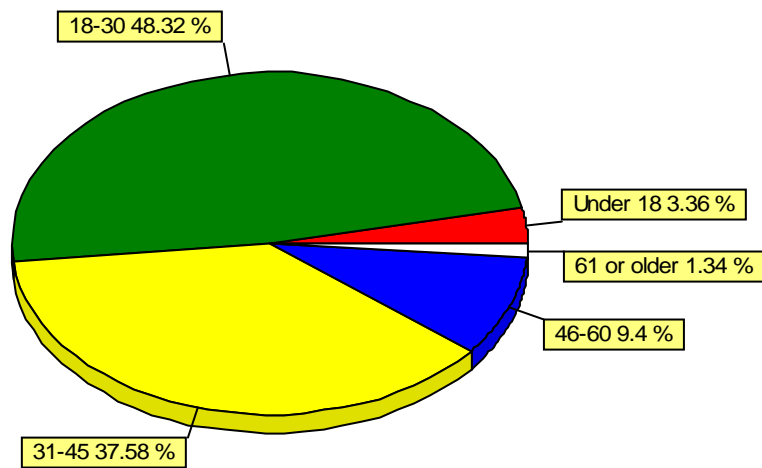
## Math Student

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What type of Internet connection do you generally use?



Age

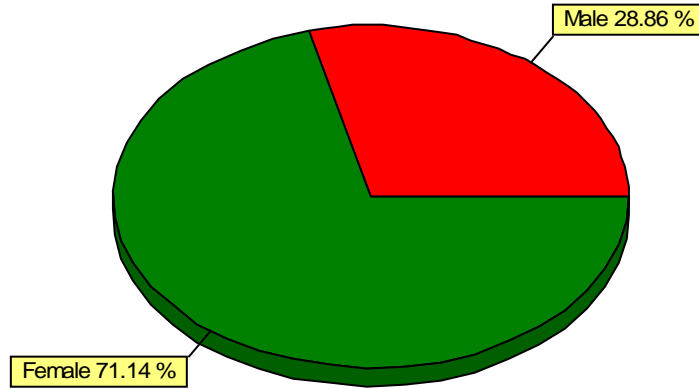


# Pie Charts

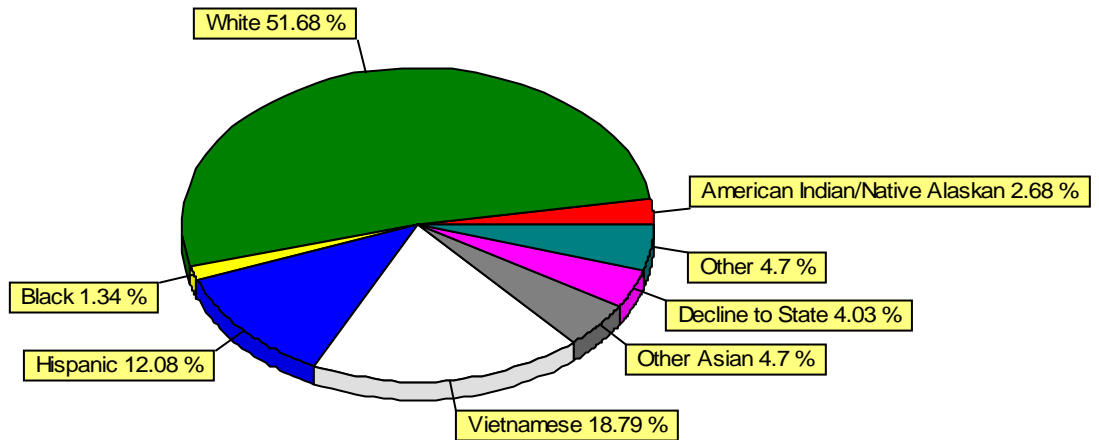
## Math Student

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Gender



Ethnicity

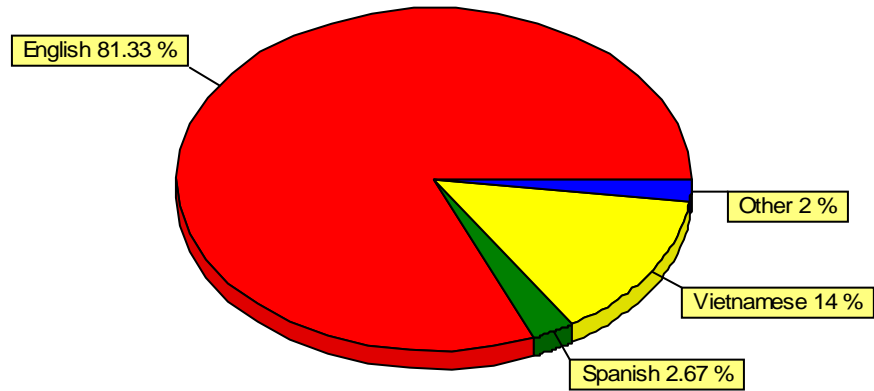


# Pie Charts

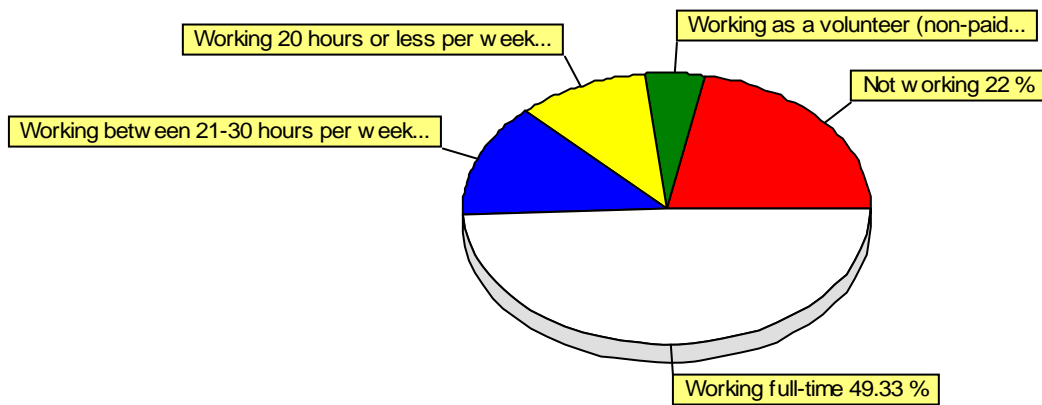
## Math Student

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Primary Language



What is your current employment status?

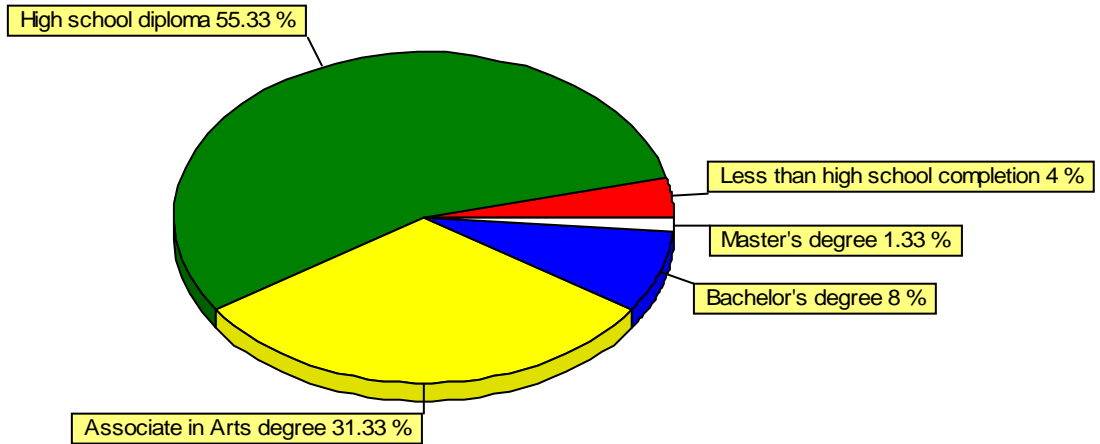


# Pie Charts

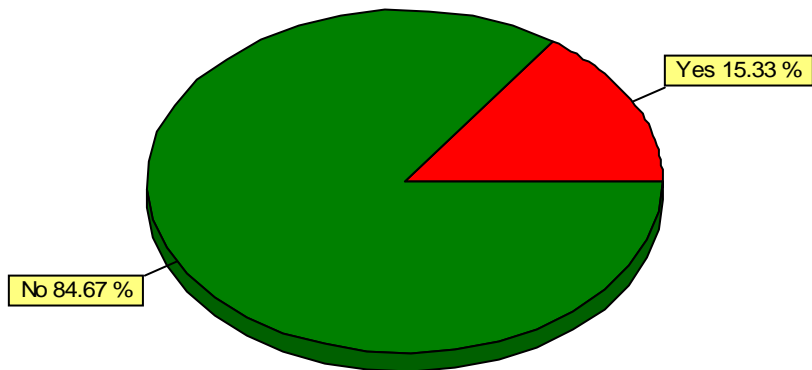
## Math Student

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What is your highest level of education?



Have you ever used math tutoring services at Coastline?



**Coastline Community College  
Program Review 2004-05  
Validation Written Report  
MATH DEPARTMENT**

1. Has the program adequately addressed the topics delineated in the "Qualitative Questions for Five-Year Program Review" self-study guidelines?

Yes    No

If no, note which topics were either omitted or not addressed clearly or substantially enough:

Does the data substantiate the conclusions and recommendations made?

Yes    No

If no, note the areas and manner in which data does not match conclusions or recommendations.

2. List the most significant things (issues, trends, concerns, etc.) that are apparent from this report:
- A. Strong growth in FTES, with particularly impressive Intersession enrollments
  - B. Increased number of distance learning and hybrid/blended options for students along with continued demand for additional hybrid courses
  - C. Need for additional equipment and workspace for faculty in the Distance Learning Department
  - D. Need for continued improvement of retention rates
  - E. The challenge of providing math tutoring at times that fit students' varied schedules.
  - F. Increased role that Math Department is playing in college partnerships in developing new programs—Early College HS, Access, TEACH<sup>3</sup>, and Informatics.
  - G. There is a need for a variety of more advanced math courses.

3. Are there any areas which are unclear or any significant points which may have been overlooked?

Yes  No

If yes, note these areas or points:

Do the concerns noted above and/or in question number 1 warrant a written response to the Program Review Steering Committee?

Yes  No  n/a

4. List any (realistic) suggestions the Steering Committee may have for the program based on information in the self-study.
- A. Follow through on the nine new goals the program has identified and specifically set a time frame of Spring 2006 for the goal of updating curriculum SLOs to meet accreditation requirements
5. List program accomplishments and ways in which the program can be commended:
- A. The department is to be commended for its high enrollments and for being among the top three FTES-producing programs at the college.
- B. Department Chair Fred Feldon is to be commended for his leadership of the program, his "entrepreneurial" efforts, and for his commitment to obtain needed program resources and to expand course and delivery options for Math students.
- C. Congratulations to the department and to Supervisor of Research Jerry Rudmann for developing and winning State approval of Coastline's own Math placement test.
- D. The program enjoys a high level of student satisfaction, for which full-time faculty members Fred Feldon and Lisa Lee, along with the department's capable team of adjuncts, are to be commended.
- E. The department did an exceptional job in accomplishing a long list of goals during the five years since their last review.
- F. The department has been highly creative in the ways in which it is delivering Math courses.



- G. The Math Department is doing a great job in analyzing the success of new delivery and instructional formats and in modifying instruction and materials based on student outcomes.
- H. The department has done a good job with summer outreach to high school students.
- I. Math faculty have been ongoing participants in their professional growth, through their professional association and other venues; both full time faculty members have made one or more conference presentations.
- J. The program is to be commended on its comprehensive and well-written report.

*Prepared by the Program Review Steering Committee  
9 May 2005*