FOOTHILL COLLEGE
Institutional Research and Planning

DATE: September 12, 2013

TO: Sarah Munoz, Instructor, Mathematics
Kathy Perino, Instructor, Mathematics
Tilly Wu, Counselor
Peter Murray, Dean, Physical Sciences, Mathematics & Engineering

FROM: Elaine Kuo, College Researcher
Thomas Margesson, Student Assistant

RE: 2013 Summer Bridge Math Program Exit Survey-Session Two

Overview

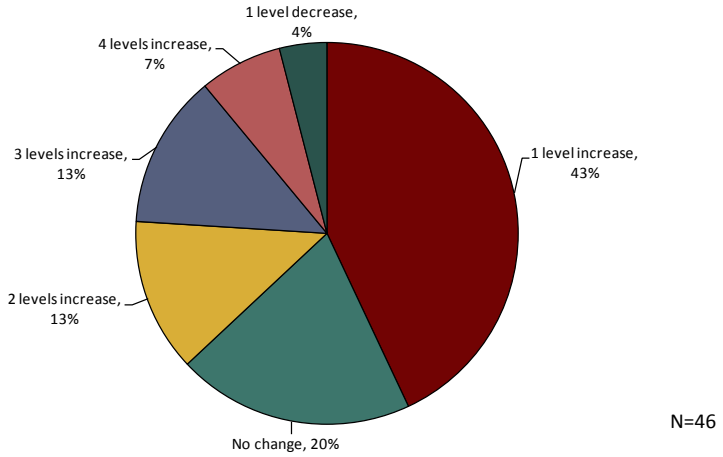
Students who completed the first session of the Summer Bridge Math Program (August 19-August 29, 2013) were asked to complete an exit survey. While 57 students started the program, 52 completed the program (91%) and 50 responded to the exit survey (96% among program completers).

Some highlights:

Placement Level Change

- Chart 1 shows the placement level change among 46 students who completed the Summer Bridge Program and had pre and post math placement data (88%). About 76% (35/46) of students increased their math placement from their pretest level (one to four levels increase); over 40% of those students who experienced a placement level increase moved up one level (20/46). About one-fourth of the students experienced no change or a decrease in their math placement (20% and 4% respectively).

Chart 1. Math Placement Level Change among Summer Bridge Program Students, August 19-29, 2013 (Session 2).



- Table 1 shows that over one-fourth of students raised their placement one level from NCBS 401A to Math 235, which represents the largest change in placement by course among all students with pre and post placement data. About two-thirds of students initially placed at the lowest math level (30/46) and over 80% of these students experienced an increase in math placement. Note that one-fifth of all students either did not experience any placement change, remaining at NCBS 401A.

Table 1. Math Placement Level Change by Course among Summer Bridge Students, August 19-29, 2013 (Session 2).

Initial placement	Final Placement	Levels Change	Students	% of Total (n=45)
NCBS 401A	Math 235	1	13	29%
NCBS 401A	NCBS 401A	0	5	11%
NCBS 401A	Math 220/217	2	5	11%
NCBS 401A	Math 105/108	3	4	9%
Math 235	Math 220/217	1	4	9%
NCBS 401A	Math 10	4	3	7%

Student Educational Experiences

- Undeclared was the most common major selected by students (16%). Other popular majors include those in business and social sciences (26%); allied health sciences (24%); fine arts (10%); science, technology, engineering or mathematics (8%). A complete list of intended majors can be viewed in the attached report.
- Almost all the students indicated they would use the tutorial services offered by PSME Center if there were enrolled in a math class this fall (90%).

Confidence Level

- After participating in the Summer Bridge Program, all students reported feeling at least somewhat prepared about their next math class and their math confidence increased somewhat or significantly.
- After participating in the Summer Bridge Program, almost all of the students reported feeling at least somewhat prepared about where to go to access Foothill resources when faced with an academic challenge (94%). Note that less than half felt they were “very prepared” (44%).
- Almost all components of the Summer Bridge program were cited as having increased students’ math confidence. While the ALEKS software was most cited (100%), followed by the ability to work at their own pace (98%), less than half of the students reported an increase in math confidence resulting from “Working with other students.”

Math Perceptions

- Math concepts were at least half of the students indicated a significant increase in their ability to perform the following math concepts include: Adding or subtracting fractions without a calculator (64%), Multiplying or dividing fractions without a calculator (56%), Operations with decimals, without a calculator (56%), Operations with negative numbers, without a calculator (54%), and Plotting points on a graph (50%).

- Math concepts where less than one-third of students indicated a significant increase in their ability to perform the following math concepts include: Finding the slope of a line (22%), graphing a line from the equation of a line (30%), and Finding the equation for a line if you are given a line (30%).

Program Expectations

- Most of the students reported that the Summer Bridge Program components met their expectations. The highest ratings were for Math faculty (48% exceeded expectations) and Math topics reviewed (38% exceeded expectations).

Program Improvements

- 100% of students reported that they would recommend the program to other students.
- 48% of the students suggested increasing the length of the program to 3 weeks long.
- 30% of the students suggested additional time with math faculty and counselors.
- 28% of the students suggested increasing opportunities to work with other students.
- 16% of the students suggested adding an English/ESLL component to the program.

Methodology

Students who participated in the Summer Bridge program were asked to fill out the exit survey on the last day of the program. Data was collected using ReMark survey software.
Math placement was calculated based on the level change between the date closest to the start of the program (August 19, 2013) and the placement received at end of the program (August 29, 2013). Students who placed at the "Review and Retest" level were coded as being placed in NCBS 401A.

Source

Summer Bridge Exit Survey
FHDA IR&P, ODS [Test]

Response rate: 50 out of 52 (96%)
57 students at time of registration

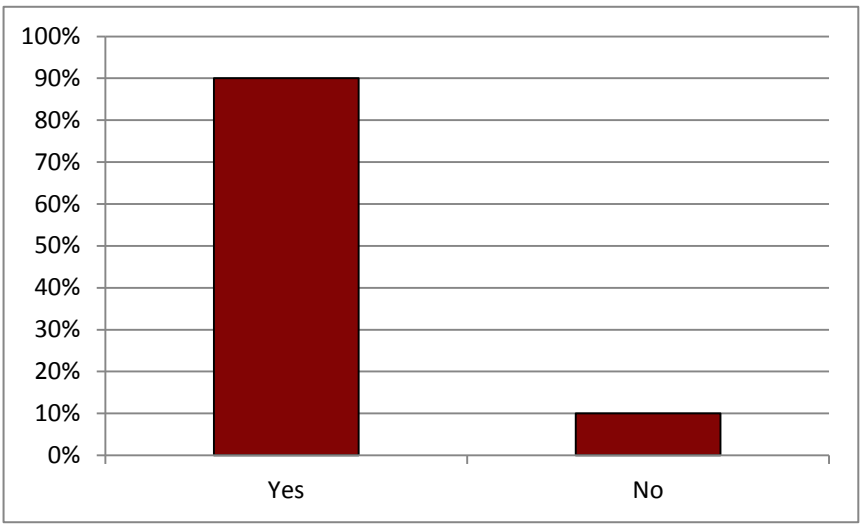
Q2. What is your current or intended major?

Response	N	%
Undecided	8	16%
Radiologic Technology	5	10%
Other	4	8%
Business Administration	3	6%
Child Development	3	6%
Communication Studies	3	6%
Veterinary Technology	3	6%
Economics	2	4%
Paramedic	2	4%
Psychology	2	4%
Art Studio	1	2%
Athletic Injury Care	1	2%
Biological Sciences	1	2%
Chemistry	1	2%
Computer Science	1	2%
Dental Hygiene	1	2%
Diagnostic Medical Sonography	1	2%
Engineering	1	2%
English	1	2%
Graphic & Interactive Design	1	2%
Humanities	1	2%
Law & Society (Pre-law)	1	2%
Music Technology	1	2%
Psychology for Transfer	1	2%
Sociology for Transfer	1	2%
Total	50	84%

Other majors include: Film & Television, International Affairs, Liberal Studies, Nutrition (x2)

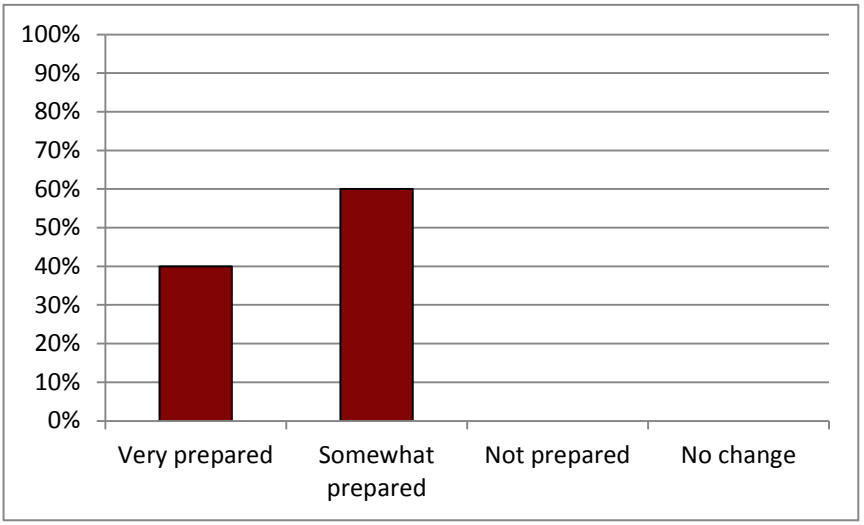
Q3. If you were to enroll in a Foothill math class this fall, would you use the tutoring services offered by PSME center?

Response	N	%
Yes	45	90%
No	5	10%
	50	100%



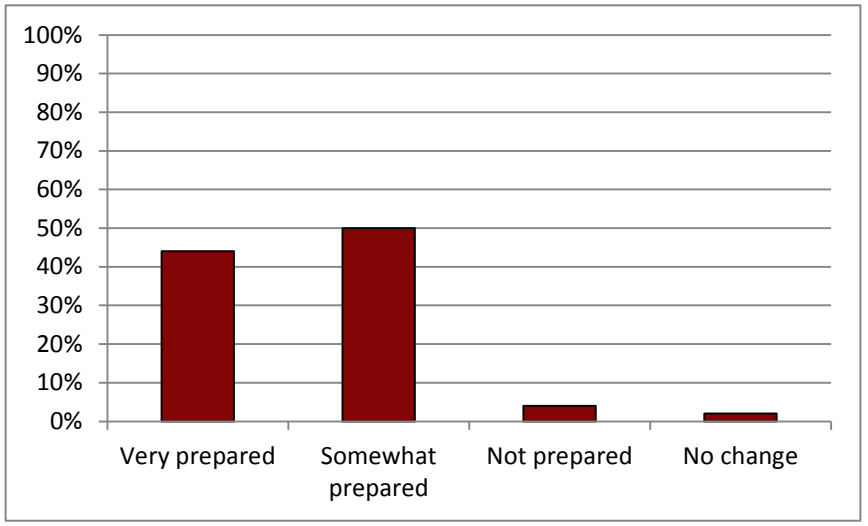
Q4. After participating in the Summer Bridge program, how prepared do you feel about the next math you will take?

Response	N	%
Very prepared	20	40%
Somewhat prepared	30	60%
Not prepared	0	0%
No change	0	0%
Total	50	100%



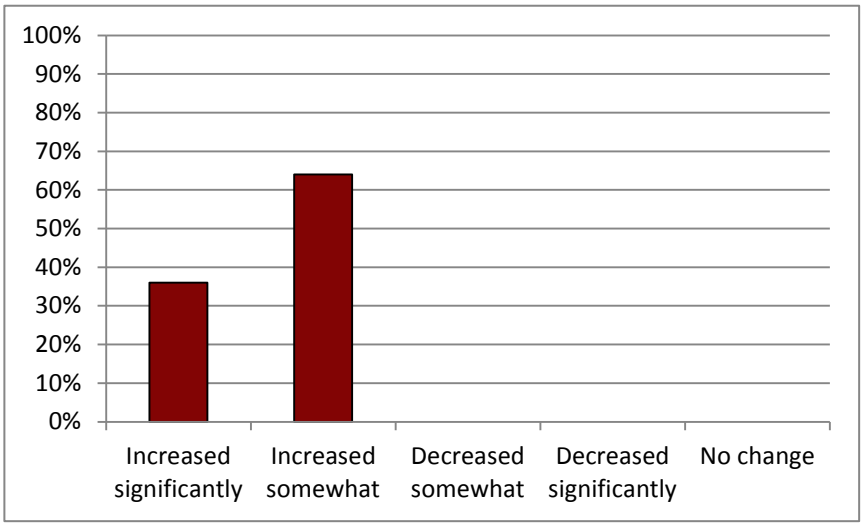
Q5. After participating in the Summer Bridge program, how prepared do you feel about where to go to access Foothill resources and services when faced with an academic challenge?

Response	N	%
Very prepared	22	44%
Somewhat prepared	25	50%
Not prepared	2	4%
No change	1	2%
Total	50	100%



Q6. Please rate your overall math confidence level after completing the Summer Bridge program.

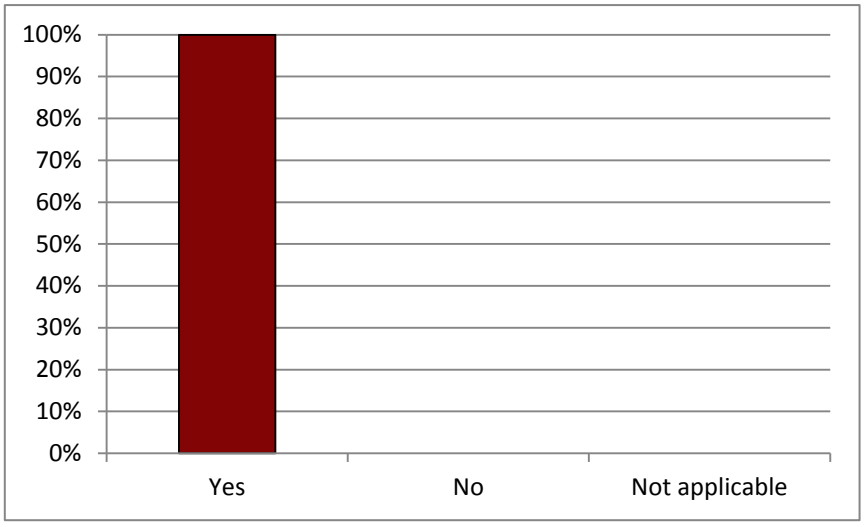
Response	N	%
Increased significantly	18	36%
Increased somewhat	32	64%
Decreased somewhat	0	0%
Decreased significantly	0	0%
No change	0	0%
Total	50	100%



Q7. Indicate if the following Summer Bridge program components increased your math confidence.

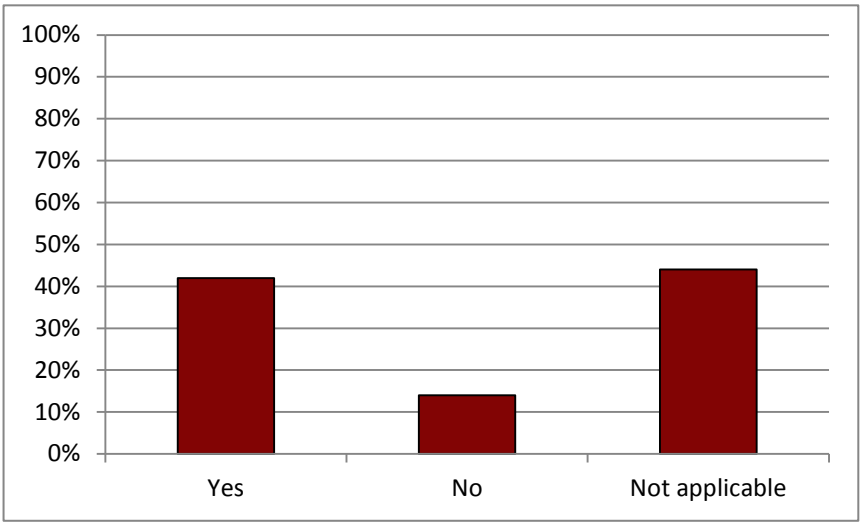
ALEKS software

Response	N	%
Yes	50	100%
No	0	0%
Not applicable	0	0%
Total	50	100%



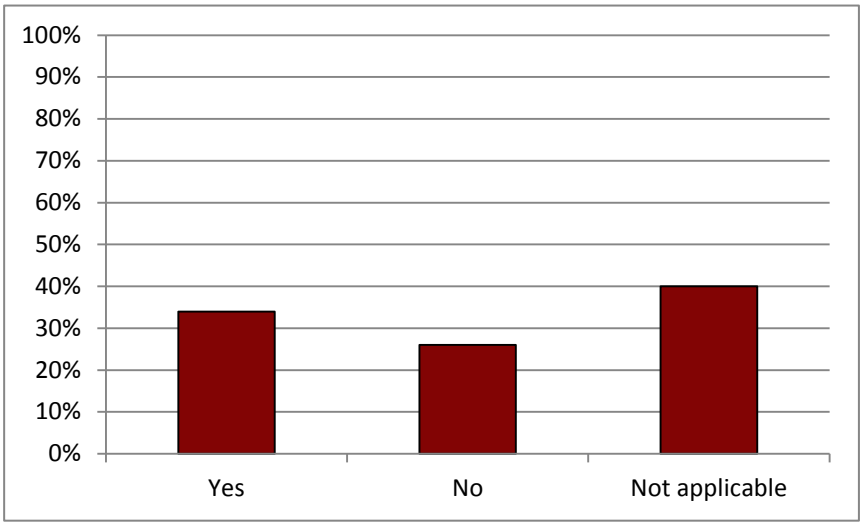
Counselors

Response	N	%
Yes	21	42%
No	7	14%
Not applicable	22	44%
Total	50	100%



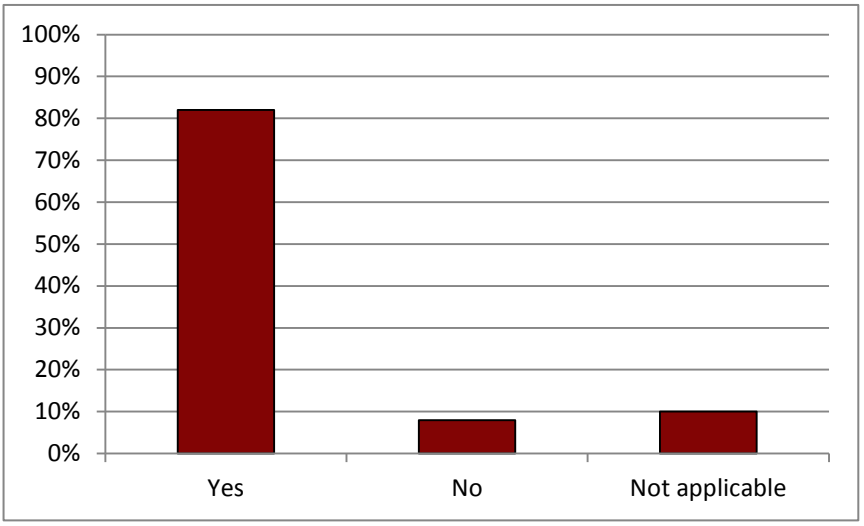
Counseling course

Response	N	%
Yes	17	34%
No	13	26%
Not applicable	20	40%
Total	50	100%



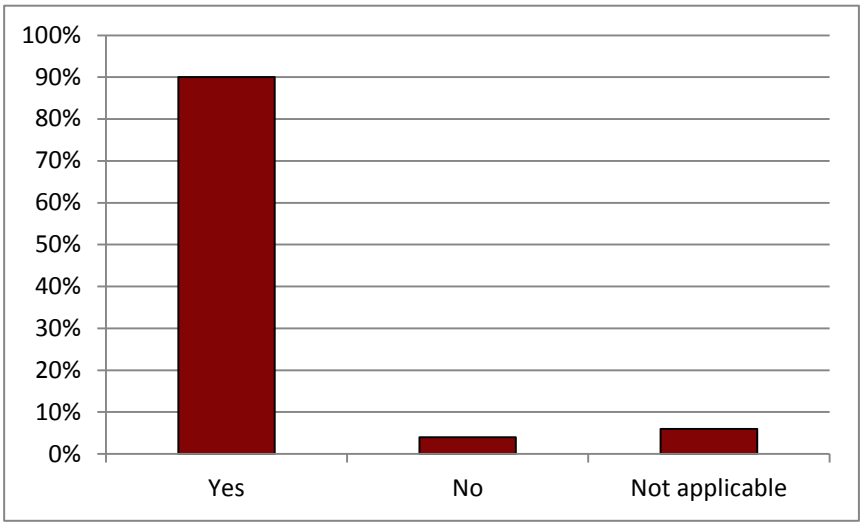
Math faculty

Response	N	%
Yes	41	82%
No	4	8%
Not applicable	5	10%
Total	50	100%



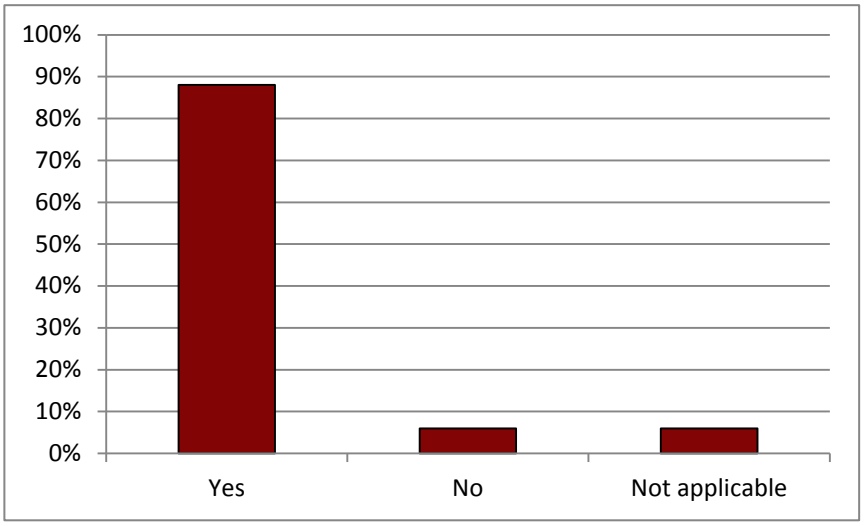
Math topics reviewed

Response	N	%
Yes	45	90%
No	2	4%
Not applicable	3	6%
Total	50	100%



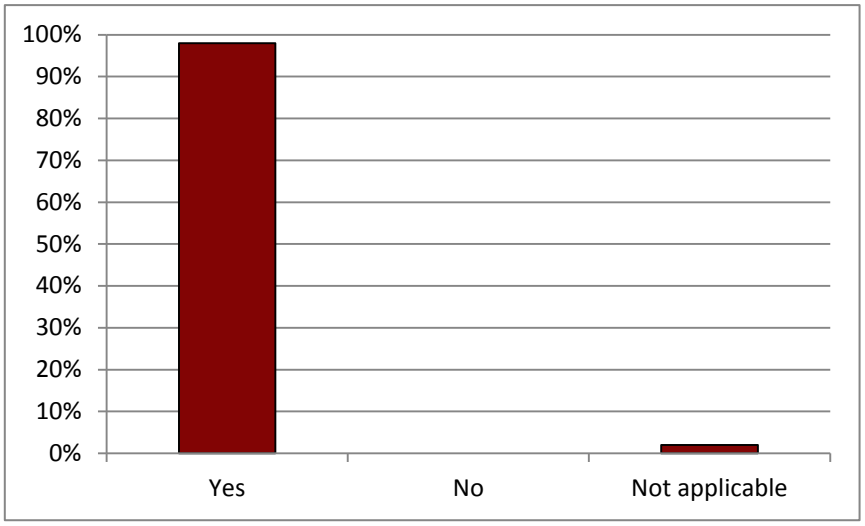
Pace of program

Response	N	%
Yes	44	88%
No	3	6%
Not applicable	3	6%
Total	50	100%



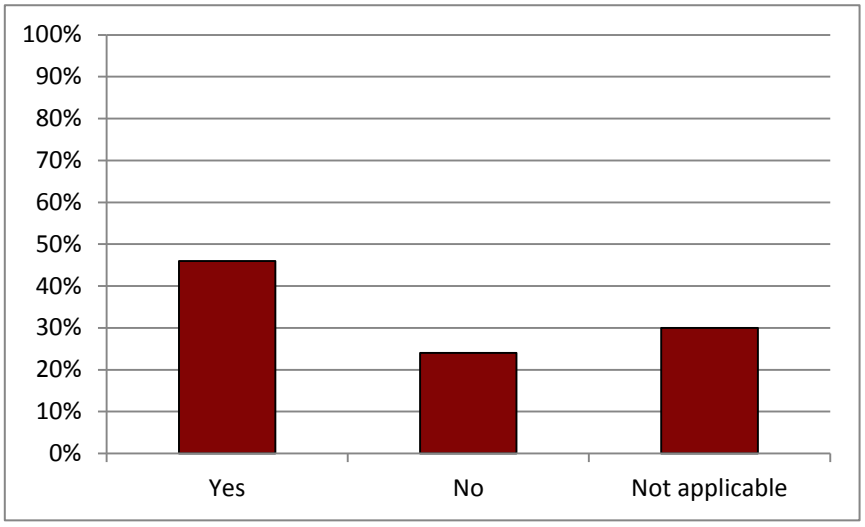
Working at own pace

Response	N	%
Yes	49	98%
No	0	0%
Not applicable	1	2%
Total	50	100%



Working with other students

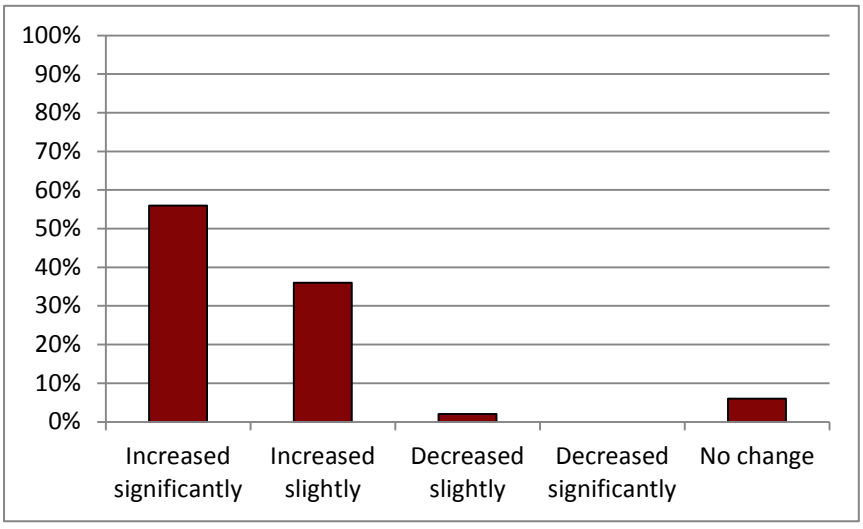
Response	N	%
Yes	23	46%
No	12	24%
Not applicable	15	30%
Total	50	100%



Q8. Please rate your confidence level regarding your ability to perform the following math concepts after taking Summer Bridge program.

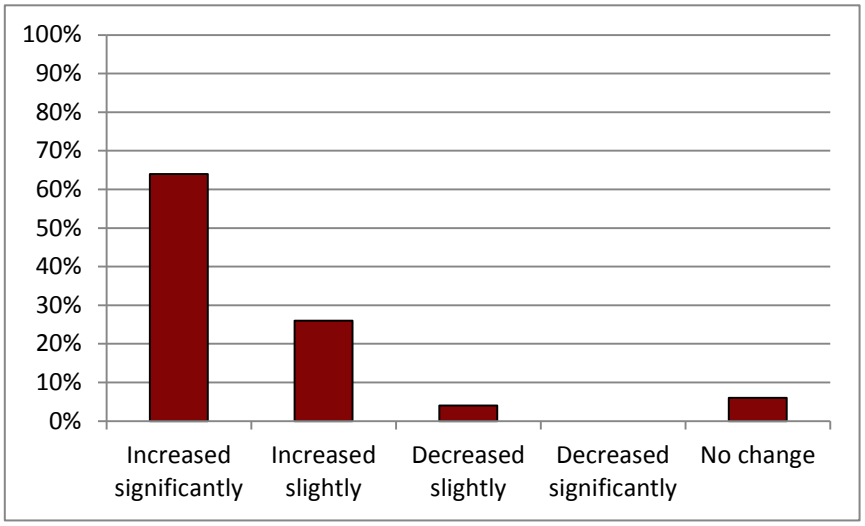
Multiplying or Dividing fractions without a calculator.

Response	N	%
Increased significantly	28	56%
Increased slightly	18	36%
Decreased slightly	1	2%
Decreased significantly	0	0%
No change	3	6%
Total	50	100%



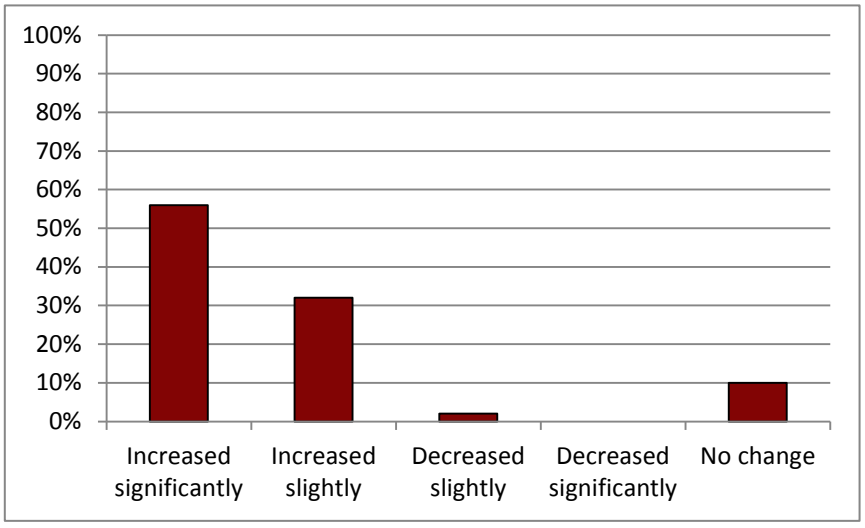
Adding or Subtracting fractions without a calculator.

Response	N	%
Increased significantly	32	64%
Increased slightly	13	26%
Decreased slightly	2	4%
Decreased significantly	0	0%
No change	3	6%
Total	50	100%



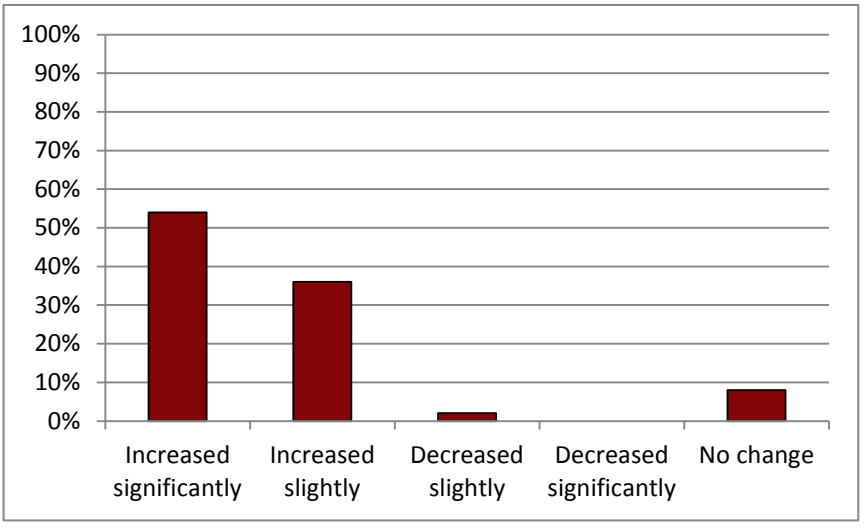
Operations (+, -, x, /) with decimals, without a calculator.

Response	N	%
Increased significantly	28	56%
Increased slightly	16	32%
Decreased slightly	1	2%
Decreased significantly	0	0%
No change	5	10%
Total	50	100%



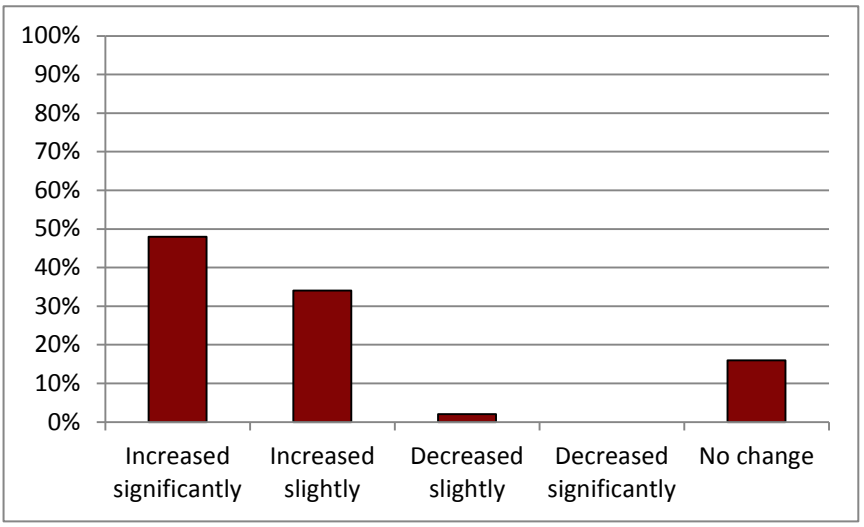
Operations (+, -, x, /) with negative numbers, without calculator.

Response	N	%
Increased significantly	27	54%
Increased slightly	18	36%
Decreased slightly	1	2%
Decreased significantly	0	0%
No change	4	8%
Total	50	100%



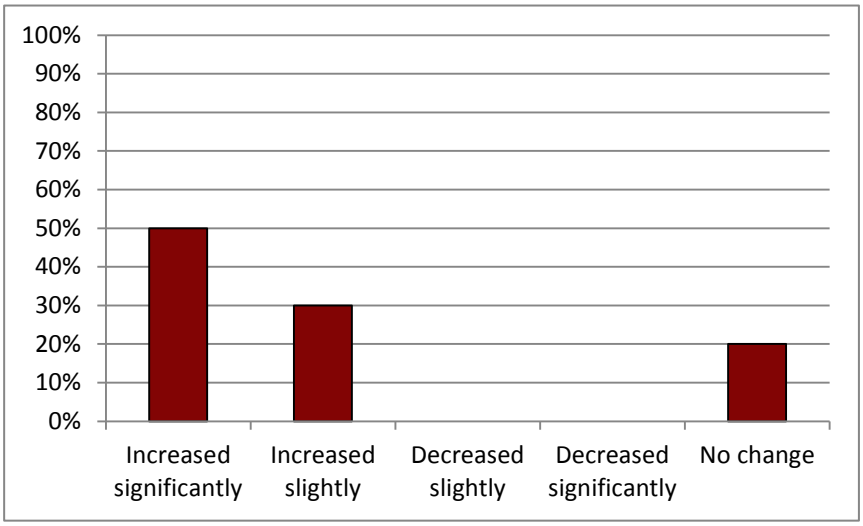
Solving equations for x.

Response	N	%
Increased significantly	24	48%
Increased slightly	17	34%
Decreased slightly	1	2%
Decreased significantly	0	0%
No change	8	16%
Total	50	100%



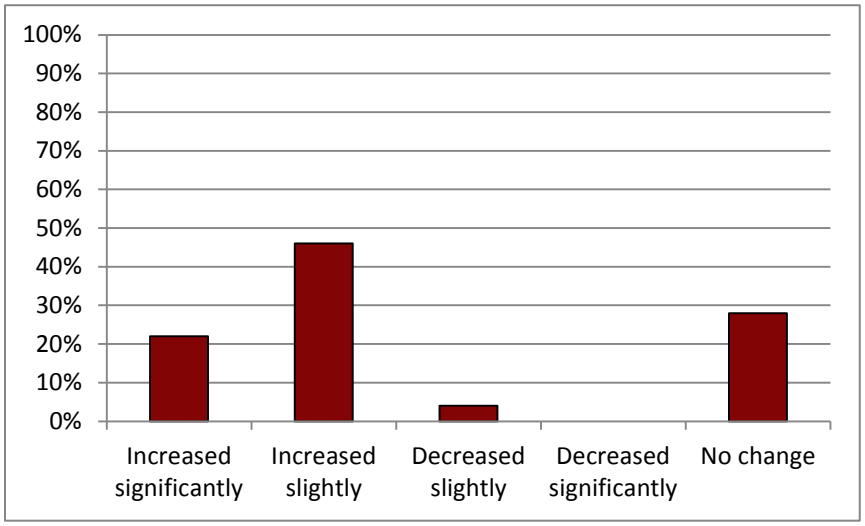
Plotting points on a graph [example: (-3, 5)].

Response	N	%
Increased significantly	25	50%
Increased slightly	15	30%
Decreased slightly	0	0%
Decreased significantly	0	0%
No change	10	20%
Total	50	100%



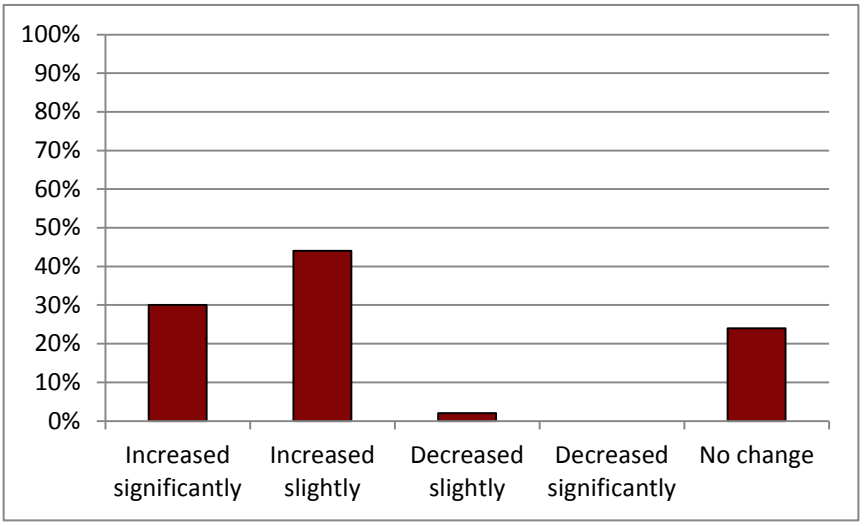
Finding the slope of a line.

Response	N	%
Increased significantly	11	22%
Increased slightly	23	46%
Decreased slightly	2	4%
Decreased significantly	0	0%
No change	14	28%
Total	50	100%



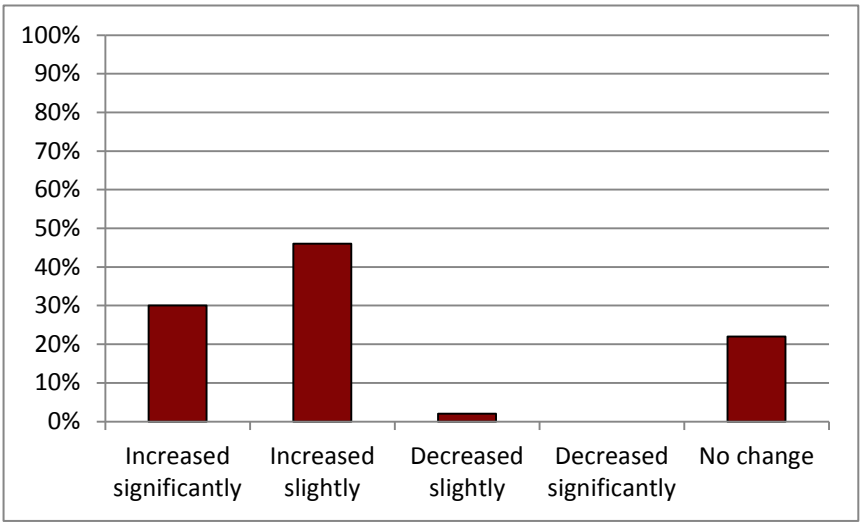
Graphing a line from the equation of a line.

Response	N	%
Increased significantly	15	30%
Increased slightly	22	44%
Decreased slightly	1	2%
Decreased significantly	0	0%
No change	12	24%
Total	50	100%



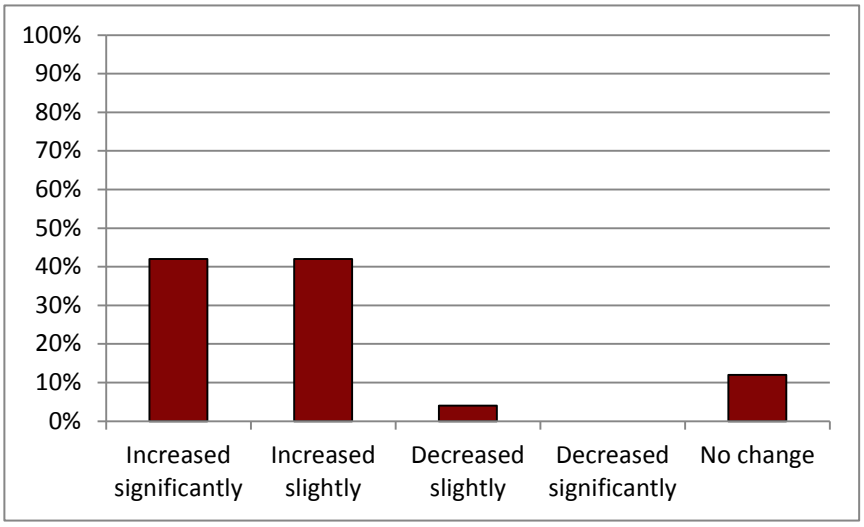
Finding the equation for a line if you are given the graph.

Response	N	%
Increased significantly	15	30%
Increased slightly	23	46%
Decreased slightly	1	2%
Decreased significantly	0	0%
No change	11	22%
Total	50	100%



Working with rules of exponents.

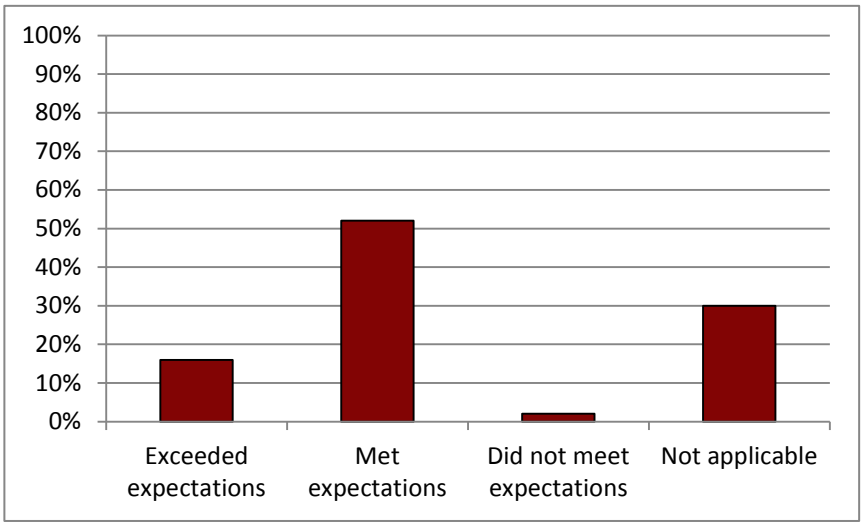
Response	N	%
Increased significantly	21	42%
Increased slightly	21	42%
Decreased slightly	2	4%
Decreased significantly	0	0%
No change	6	12%
Total	50	100%



Q9. Please indicate whether the following program components met your expectations:

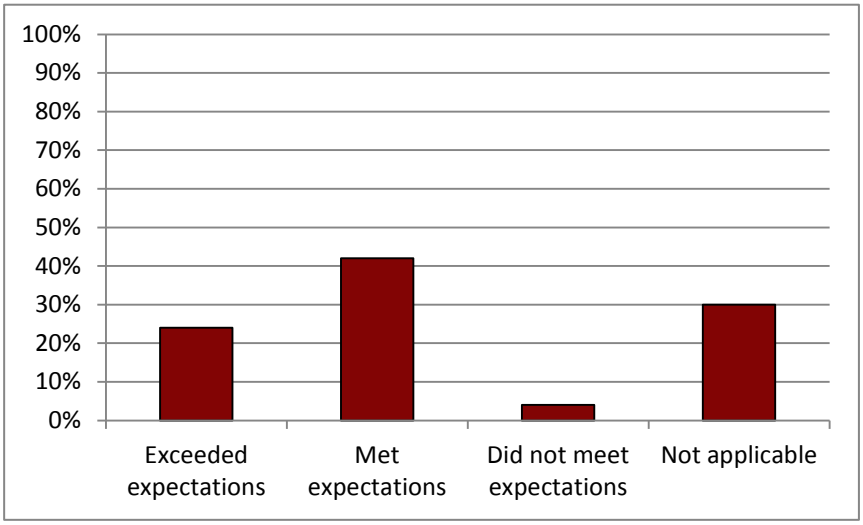
Counseling topics covered

Response	N	%
Exceeded expectations	8	16%
Met expectations	26	52%
Did not meet expectations	1	2%
Not applicable	15	30%
Total	50	100%



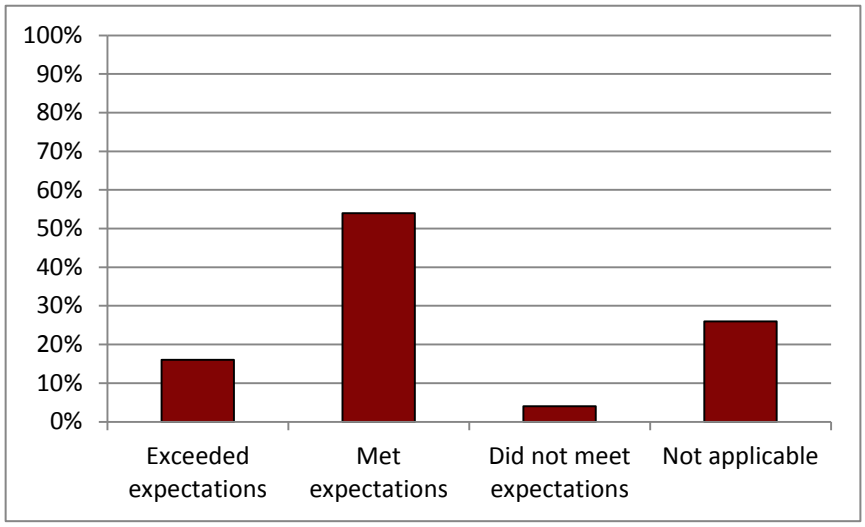
Counseling faculty

Response	N	%
Exceeded expectations	12	24%
Met expectations	21	42%
Did not meet expectations	2	4%
Not applicable	15	30%
Total	50	100%



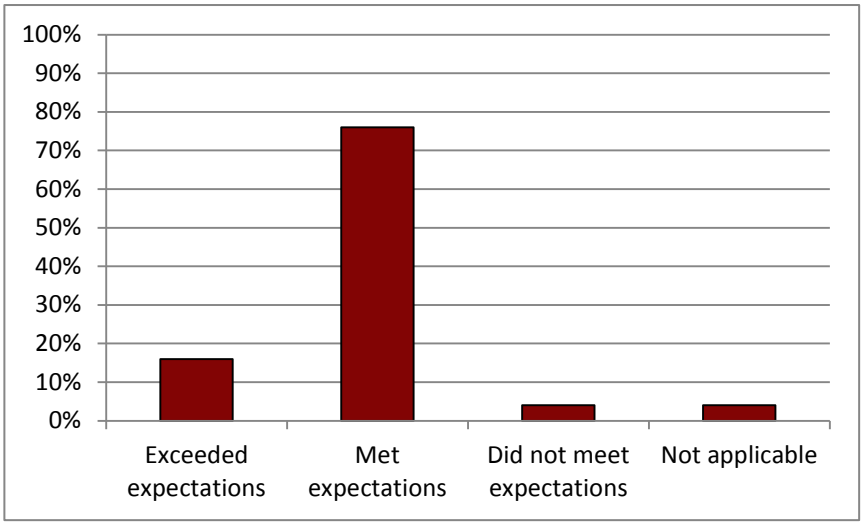
Getting familiar with Foothill campus

Response	N	%
Exceeded expectations	8	16%
Met expectations	27	54%
Did not meet expectations	2	4%
Not applicable	13	26%
Total	50	100%



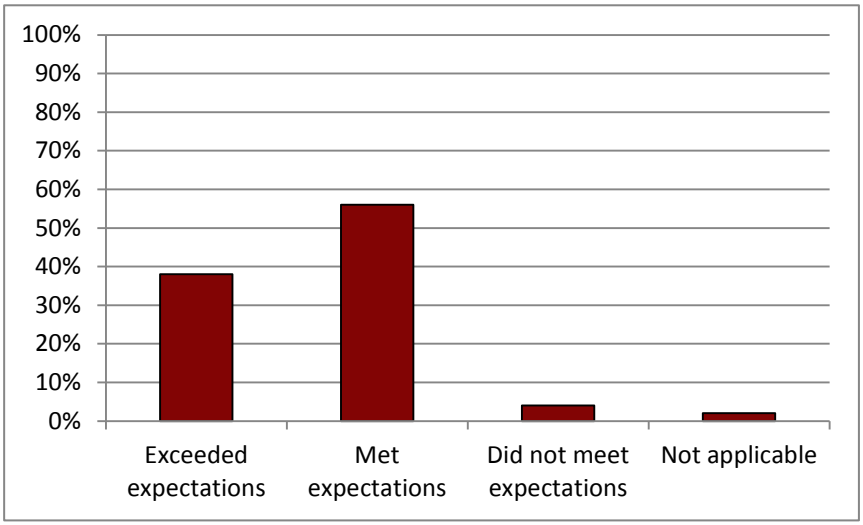
Length of program

Response	N	%
Exceeded expectations	8	16%
Met expectations	38	76%
Did not meet expectations	2	4%
Not applicable	2	4%
Total	50	100%



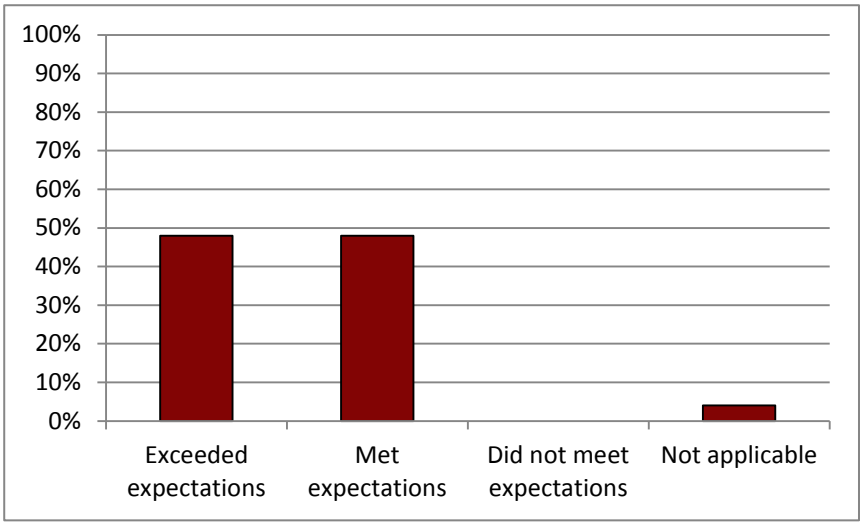
Math topics reviewed

Response	N	%
Exceeded expectations	19	38%
Met expectations	28	56%
Did not meet expectations	2	4%
Not applicable	1	2%
Total	50	100%



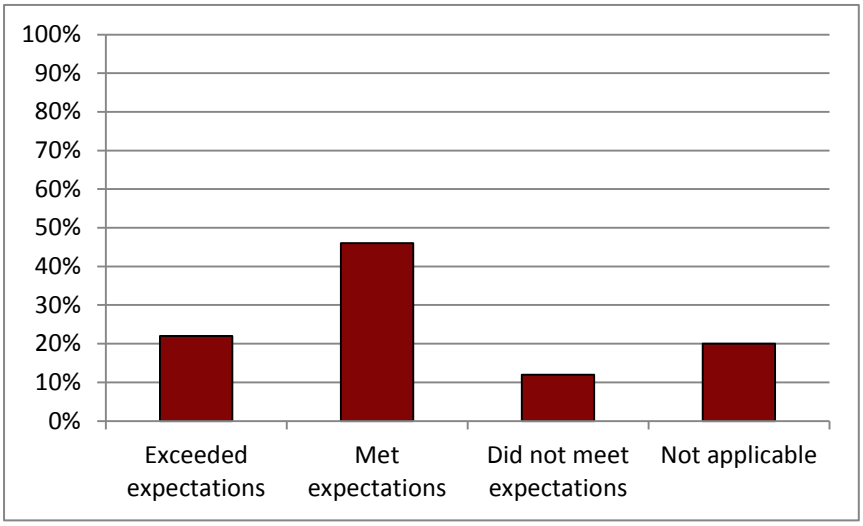
Math faculty

Response	N	%
Exceeded expectations	24	48%
Met expectations	24	48%
Did not meet expectations	0	0%
Not applicable	2	4%
Total	50	100%



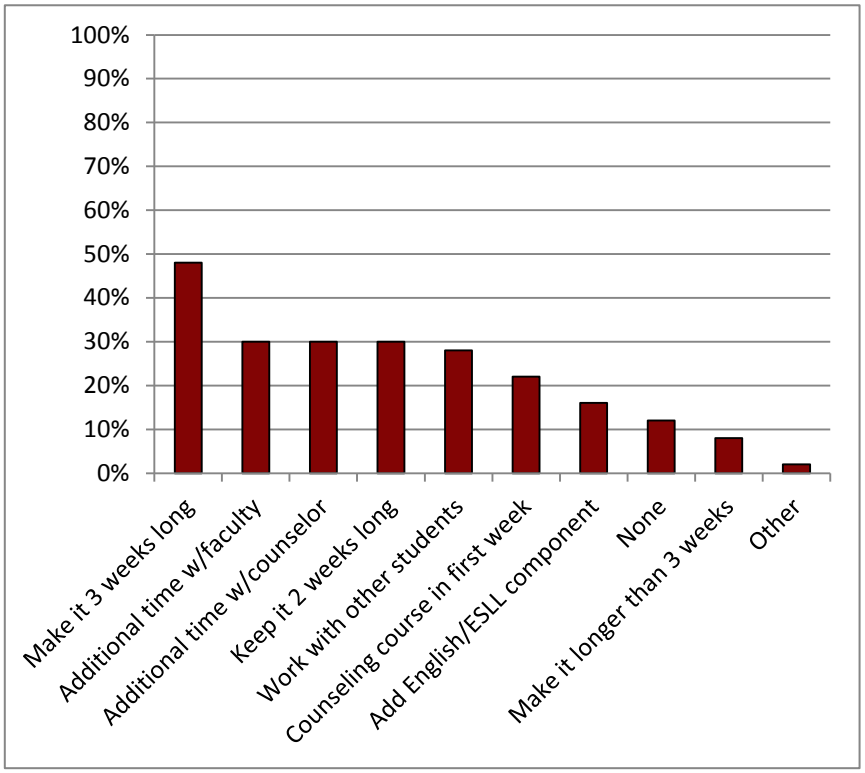
Meeting other students

Response	N	%
Exceeded expectations	11	22%
Met expectations	23	46%
Did not meet expectations	6	12%
Not applicable	10	20%
Total	50	100%



Q10. What improvements or suggestions do you have for the Summer Bridge program? (check all boxes that apply)

Response	N	%
Make it 3 weeks long	24	48%
Additional time with math faculty	15	30%
Additional time with counselor	15	30%
Keep it 2 weeks long	15	30%
Opportunity to work with other students	14	28%
Have counseling course in first week	11	22%
Add English/ESLL component to the program	8	16%
None	6	12%
Make it longer than 3 weeks	4	8%
Other	1	2%
	50	



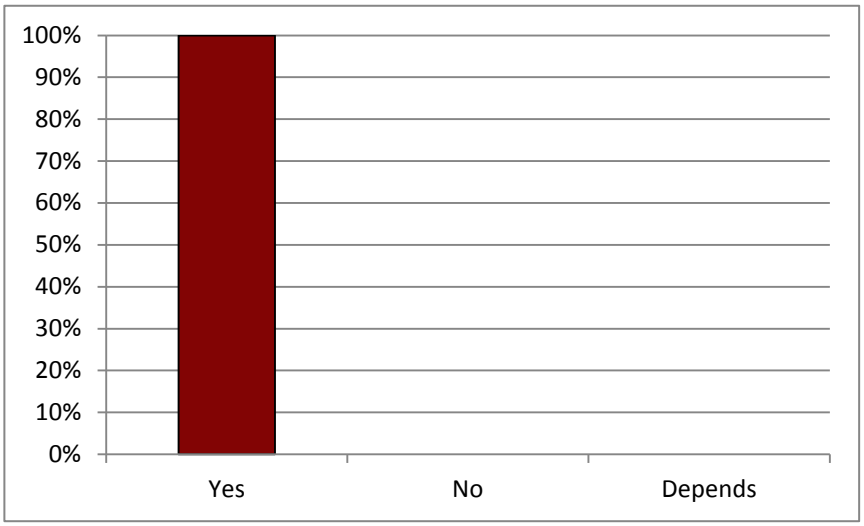
Other:

Make it start earier in the summer

NOTE: Respondents were able to select more than one answer, so percentages do not equal 100%.

Q11. Would you recommend the Summer Bridge program to other students?

Response	N	%
Yes	50	100%
No	0	0%
Depends	0	0%
Total	50	100%



Comments:

"Because it helped me review more than I would have if I were to do it on my own, and it is your own pace and it is designed specifically for you after you take a quiz."

Because it is helpful and it goes at each student's pace.

I feel like it gives the students a good chance to work at their own speed and actually take their time learning things besides feeling rushed.

"I feel like the Summer Bridge Math Program was a great way to refresh my memory of all the math material I covered in high school. One of the most fabulous aspects of the program was how it allowed me to work at my own pace, so no matter what skill level my classmates were at, I could focus on what was most beneficial for me. I had the flexibility of being able to do ALEKS at home in my own free time. For the most part, ALEKS was very good at explaining concepts which I had a hard time understanding. It was useful to have a teacher for when I needed additional clarification. The way that it showed me my progress made me feel more confident with my skills. By doing a review every day of what I learned previously, I kept the material fresh in my mind and retained the information better. Although I do not think I have enough skill yet to place into the class I was hoping for, I feel like I have a much stronger foundation of math knowledge which will help me going forward. In two weeks, I feel like I have accomplished more than I would have in an entire quarter. Lastly, I feel like if the class had been just a week longer, I may have had more time to cover more material, and I feel like this would have helped me place into the Intermediate math class which I was aiming for. I will definitely recommend friends and classmates to do this course in the future, and I will inform teachers about this program so that more students have access to it."

"I felt that the Summer Bridge program DEFINITELY helped my overall confidence level in regards to math. Although I was a whole level above everyone else in the room, and that slowed me down a little, I was able to really improve my overall skills while here. The Aleks program is great, and the math staff was a huge help. I definitely wish that this could have been one more week, but in general I would certainly recommend this to friends. It's completely life-changing as far as math is concerned, and for anyone who hasn't taken math in a while, Summer Bridge is a fantastic way to review over a short period of time. THANK YOU for making my experience such a good one!"

Comments, continued:

I would recommend this program to others because it really helped me refresh my memory on a lot of the math topics

"In learning any subject, the learner subjects themselves to a state of vulnerability. I believe it is the job of the teachers to create a warm, welcoming environment that encourages learners to feel secure in their knowledge and problem solving skills. The summer bridge program provided that environment for me."

in reality all we need is a quick refresher course.

It is a great review before jumping into a math class again. Especially for students like me that have not take math in two years!

It is definitely a very good and well needed review and thia class will let you know exactly what you do need to work on or improve your skills at.

It was great! Counseling 5 could have been for more days but fewer hrs. per day. Got in the way of math study.

It was very helpful to me. I relearned a lot of material that I had forgotten since high school. I feel more confident about math in the fall quarter now.

It's a great program and helps you better your skills.

"its a great way to get yolu back on your toes with school, and just be reminded how to do simple math again"

It's a great way to refresh yourself after the summer. It reminds you of all the topics that you've taken in the past and you can go at your own pace. Another thing that it does is show you how you might place in the placement test.

Just practicing the problems on the software helped me feel more confident about math. I found that I knew most of the material I just needed to review it. The material I didn't know I could ask my instructor about. Overall the program was very helpful.

summer bridge remind reminds you many things you probably forgot

The summer bridge program will give a reality check to let you know what you need help with and what level you are in math. I was unable to devote as much time as I needed so this helps me to plan ahead for future sucess. Thank you all for your help and encouragement.

This program made me review all the math that I learned in high school without expend a whole quarter doing so. The professor was very helpful as well and always tried to explain what we didn't know or remember. I highly recommend this program.

33% Complete

FOOTHILL COLLEGE

SUMMER BRIDGE MATH PROGRAM

Thank you for your participation in Foothill College's Summer Bridge Math Program! We hope you had the opportunity to review your math skills and improve your math placement. Any feedback you have about the program would be greatly appreciated.

Survey results will be used to evaluate and enhance the Summer Bridge Math Program.

All questions require a response.

Q1. What is your student identification number?
(If you do not know your ID#, please enter 87654321)

Q2. What is your current or intended major? Please Select One

If other: Please specify

Q3. If you were to enroll in a Foothill math class this fall, would you use the tutoring services offered by PSME center?

- ◯ Yes
- ◯ No

Q4. After participating in the Summer Bridge program, how prepared do you feel about the next math you will take?

- ◯ Very prepared
- ◯ Somewhat prepared
- ◯ Not prepared
- ◯ No change

Q5. After participating in the Summer Bridge program, how prepared do you feel about where to go to access Foothill resources and services when faced with an academic challenge?

- ◯ Very prepared
- ◯ Somewhat prepared
- ◯ Not prepared
- ◯ No change

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Updated 07/17/2013

67% Complete

FOOTHILL COLLEGE

SUMMER BRIDGE MATH PROGRAM

All questions require a response.

Q6. Please rate your overall math confidence level after completing the Summer Bridge program.

- Increased significantly
- Increased somewhat
- Decreased somewhat
- Decreased significantly
- No change

Q7. Indicate if the following Summer Bridge program components increased your math confidence.

	Yes	No	Not applicable
ALEKS software			
Counselors			
Counseling course			
Math faculty			
Math topics reviewed			
Pace of program			
Working at own pace			
Working with other students			

Q8. Please rate your confidence level regarding your ability to perform the following math concepts after taking Summer Bridge program.

	Increased significantly	Increased slightly	Decreased slightly	Decreased significantly	No change
Multiplying or Dividing fractions without a calculator.					
Adding or Subtracting fractions without a calculator.					
Operations (+, -, x, /) with decimals, without a calculator.					
Operations (+, -, x, /) with negative numbers, without calculator.					
Solving equations for x.					
Plotting points on a graph [example: (-3, 5)].					
Finding the slope of a line.					

Graphing a line from the equation of a line.	○	○	○	○	○
Finding the equation for a line if you are given the graph.	○	○	○	○	○
Working with rules of exponents.	○	○	○	○	○

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100% Complete

FOOTHILL COLLEGE

SUMMER BRIDGE MATH PROGRAM

All questions require a response.

Q9. Please indicate whether the following program components met your expectations:

	Exceeded expectations	Met expectations	Did not meet expectations	Not applicable
Counseling topics covered	○	○	○	○
Counseling faculty	○	○	○	○
Getting familiar with Foothill campus	○	○	○	○
Length of program	○	○	○	○
Math topics reviewed	○	○	○	○
Math faculty	○	○	○	○
Meeting other students	○	○	○	○

Q10. What improvements or suggestions do you have for the Summer Bridge program? (check all boxes that apply)

- ☐ Add English/ESLL component to the program
- ☐ Additional time with math faculty
- ☐ Additional time with counselor
- ☐ Have counseling course in first week
- ☐ Keep it 2 weeks long
- ☐ Make it 3 weeks long
- ☐ Make it longer than 3 weeks
- ☐ Opportunity to work with other students
- ☐ Other Please specify
- ☐ None

Q11. Would you recommend the Summer Bridge program to other students?

- ○ Yes
- ○ No
- ○ Depends

Please explain:

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