

# MT. San Jacinto College

## Office of Institutional Research

### ACCUPLACER Math Placement Cut Score Analysis

Fall 2011 through Spring 2017

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## Summary and Findings Brief

### Purpose –

Focus of report is to determine if cut scores are properly placing students to enter college level math. Additionally look at the impact of Math 094 being added into Placement testing.

### Methodology –

MSJC student’s Math placement level testing scores and Math course performance records in MATH-055 through MATH-211 were extracted from the MSJC database for a six year period, from AY11-12 to AY16-17. There were 60,644 individual students, 28,936 Math course enrollments and 71,729 Math Placement records analyzed. Of these 60,644 students, 9,004 students enrolled and earned a grade in their assessed course. There were 7,790 that took and earned a grade for College Level Math (CLM), 7,313 of these students were by matriculation. Only enrollments with earned grades at MSJC are included, neither withdraws nor transfer credit are included in GPA or Success Rate analysis. Student’s course performance are plotted against their math placement scores.

### Cut Score Table

<b>Assessment Testing</b>		
<b>Course Placement</b>	<b>Range of Scores</b>	<b>Type of Assessment</b>
Math 55 (Pre-Algebra with Arithmetic)	31 - 75	Accuplacer Arithmetic
Math 60 (Pre-Statistics)	31 - 120 or 20 - 103	Accuplacer Arithmetic or Accuplacer Algebra
Math 90 (Elementary Algebra) or Math 90A (Elementary Algebra Part A)	76 - 120 or 44 - 62	Accuplacer Arithmetic or Accuplacer Algebra
Math 94 (Accelerated Algebra)	51 - 103	Accuplacer Algebra
Math 96 (Intermediate Algebra) or Math 96A (Intermediate Algebra Part A)	63 - 103	Accuplacer Algebra
Math 105 (College Algebra); Math 115 (Ideas of Mathematics) or Math 140 (Introduction to Statistics)	104 - 120 or 62 - 76	Accuplacer Algebra or Accuplacer College Level Math (CLM)
Math 110 (Pre-Calculus); Math 135 (Calculus for Social Science and Business)	77 - 103	Accuplacer College Level Math (CLM)
Math 211 (Analytic Geometry & Calculus I)	104 - 120	Accuplacer College Level Math (CLM)

## Summary Results –

Students placing into college level math (MATH-105/115/140) directly from Accuplacer CLM received the highest average GPA (3.20) with an average Success Rate of (88.9%). Lowest average GPA (2.08) and Success Rate (67.5%) for MATH-090 Accuplacer Algebra cut scores.

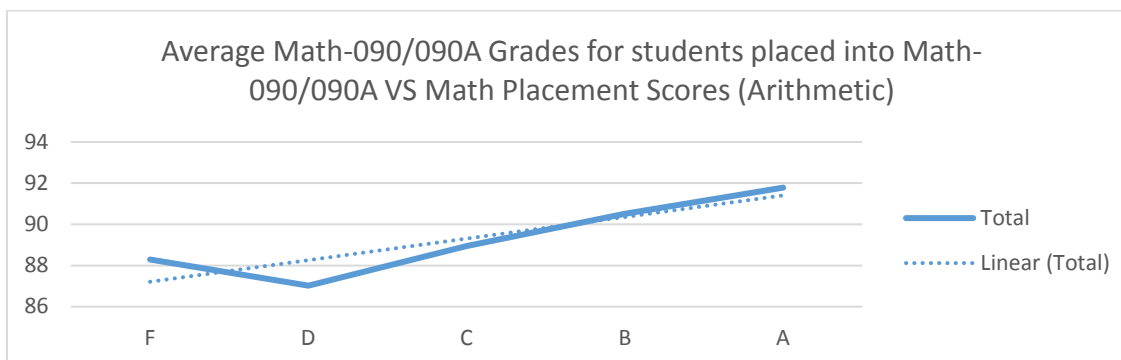
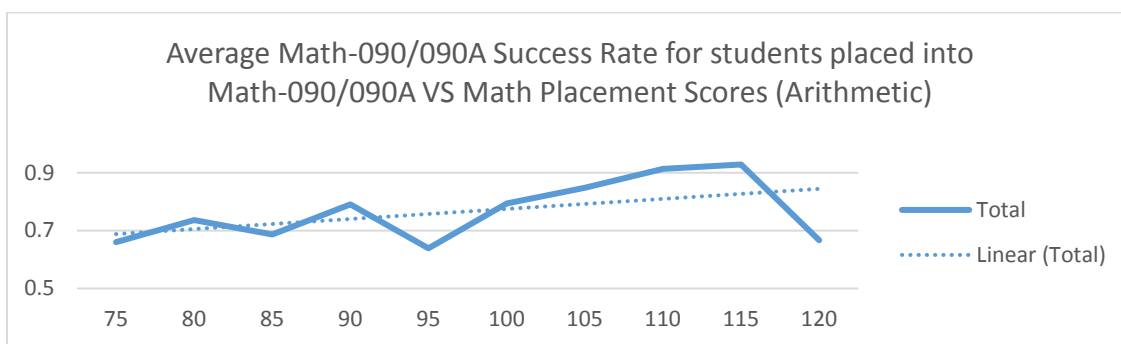
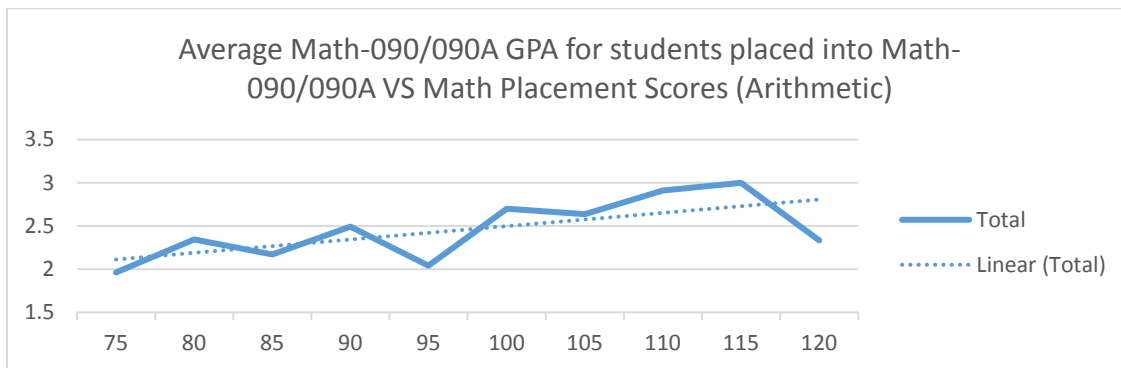
Students with a higher placements score translated into a higher grade, except for cut scores areas MATH-094 and MATH-105/115/140 this can be attributed to the small population size for these areas. 87 for MATH-094 and 477 for MATH-105/115/140.

Our largest population size for direct placement of students occurred in cut score areas MATH-096/096A and MATH-090/090A: 5,285 for MATH-096/096A and 3,155 for MATH-090/090A.

## Findings –

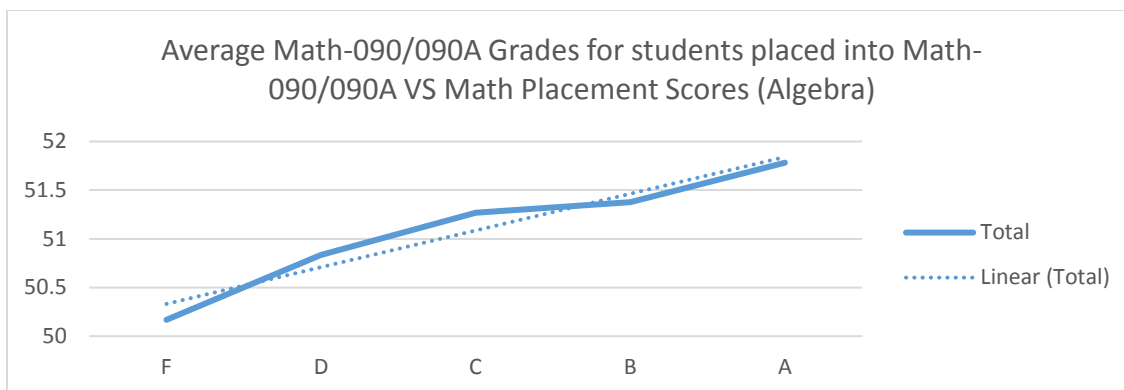
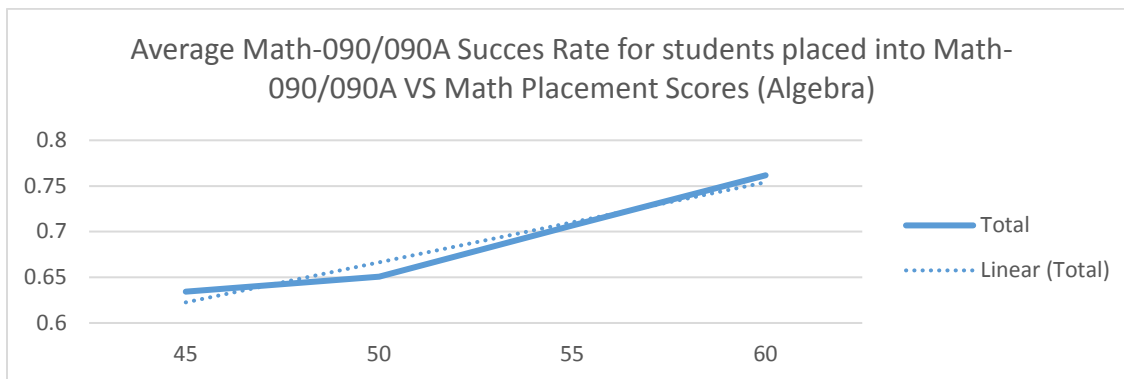
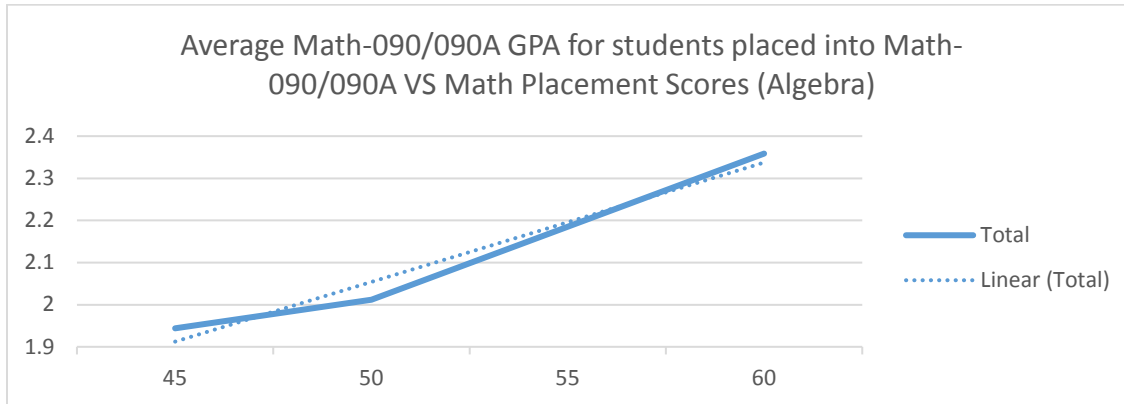
Math-090/090A Accuplacer Arithmetic with a cut score of 76 to 120, had an average group score of 89.92. Those students receiving a C or better had an average score range of 89 to 93. Average GPA range was 1.96 to 3.00 with an overall average of 2.35. The average success rate range was 63.9% to 92.9% with an overall success rate average of 73.9%.

Headcount	Average GPA	Average Success Rate	Average Score
524	2.35	73.9%	89.92



Math-090/090A Accuplacer Algebra with a cut score of 44 to 62, had an average group score of 51.05. Those students receiving a C or better had an average score range of 51 to 52. Average GPA range was 1.94 to 2.36 with an overall average of 2.08. The average success rate range was 63.4% to 76.1% with an overall success rate average of 67.5%.

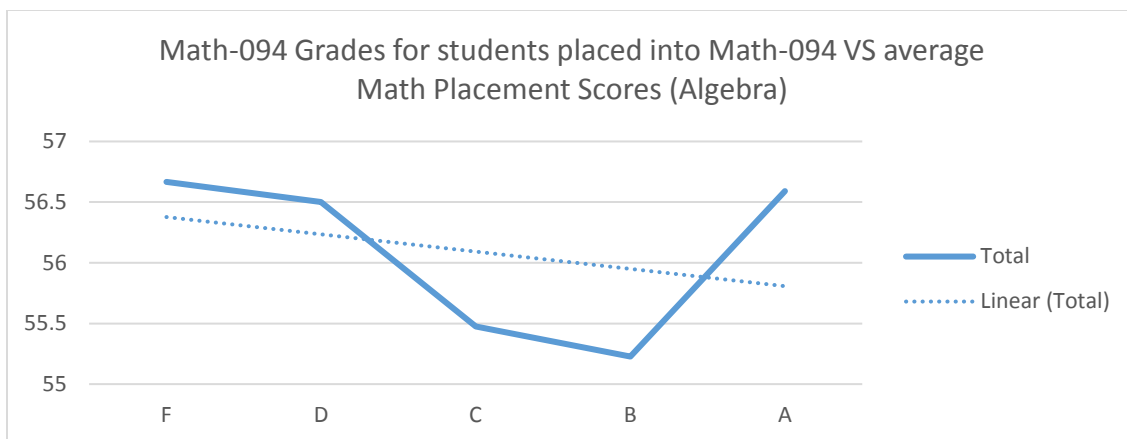
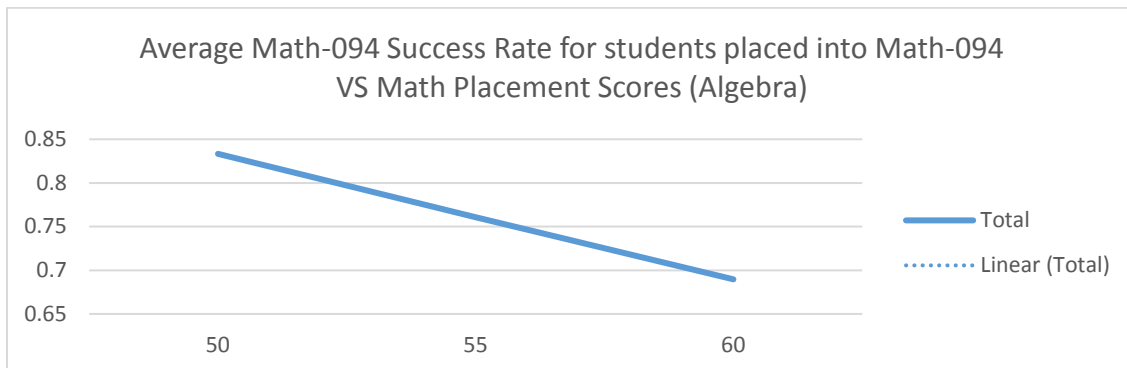
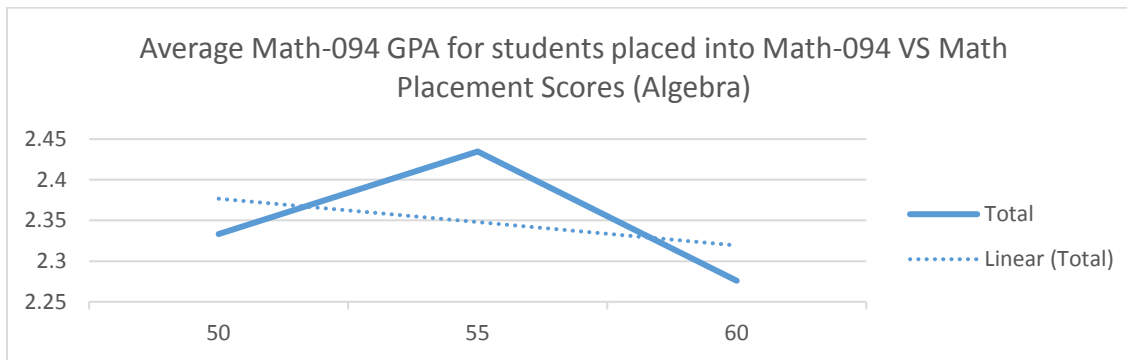
Headcount	Average GPA	Average Success Rate	Average Score
2,631	2.08	67.5%	51.05



Math-094 Accuplacer Algebra with a cut score of 51 to 103, had an average group score of 56.10. Those students receiving a C or better had an average score range of 55 to 57. Average GPA range was 2.28 to 2.43 with an overall average of 2.37. The average success rate range was 69.0% to 83.3% with an overall success rate average of 74.7%.

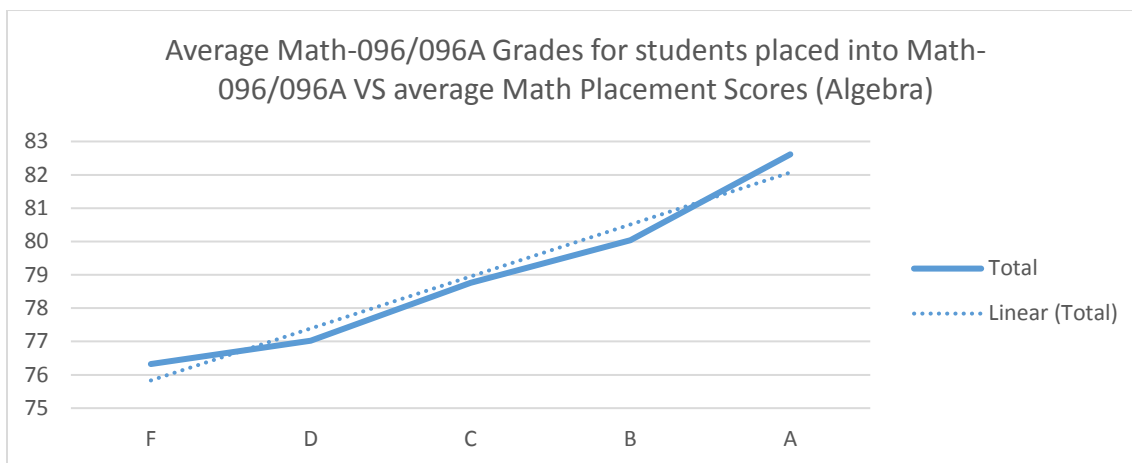
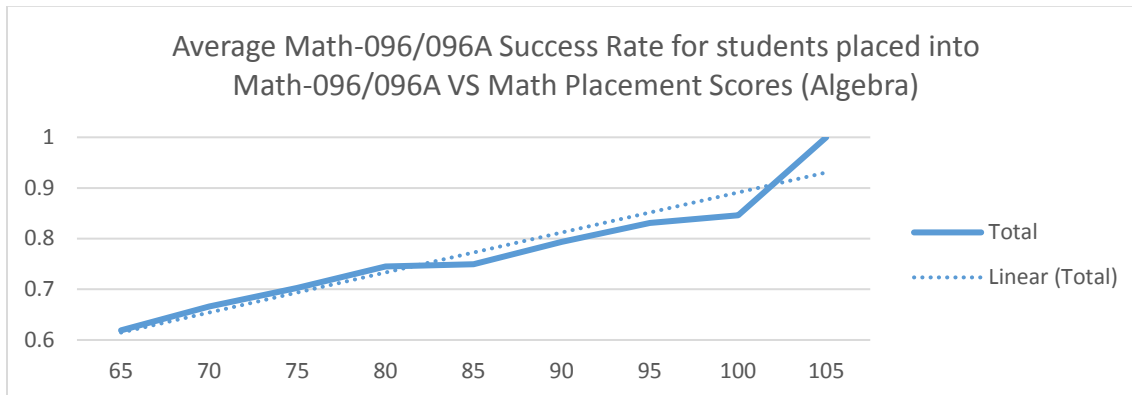
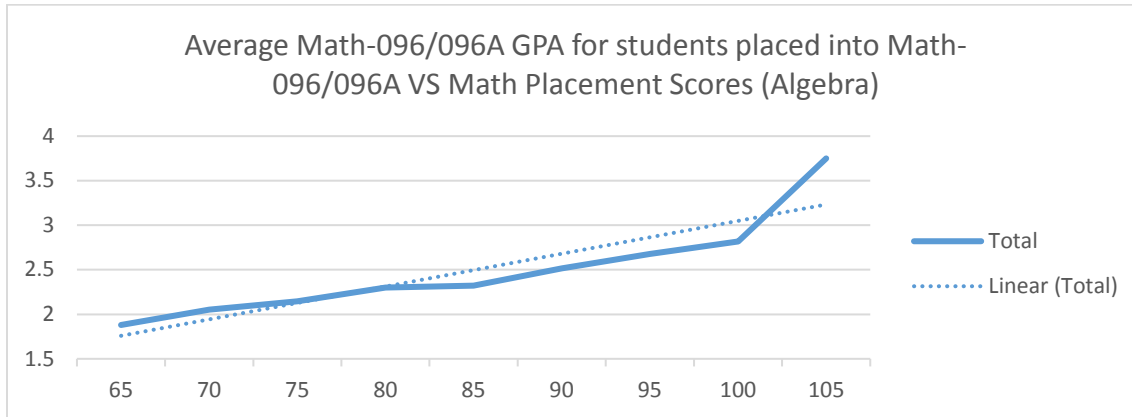
Students with an Algebra placement score of 64 to 103 enrolled in Math-096.

Headcount	Average GPA	Average Success Rate	Average Score
87	2.37	74.7%	56.10



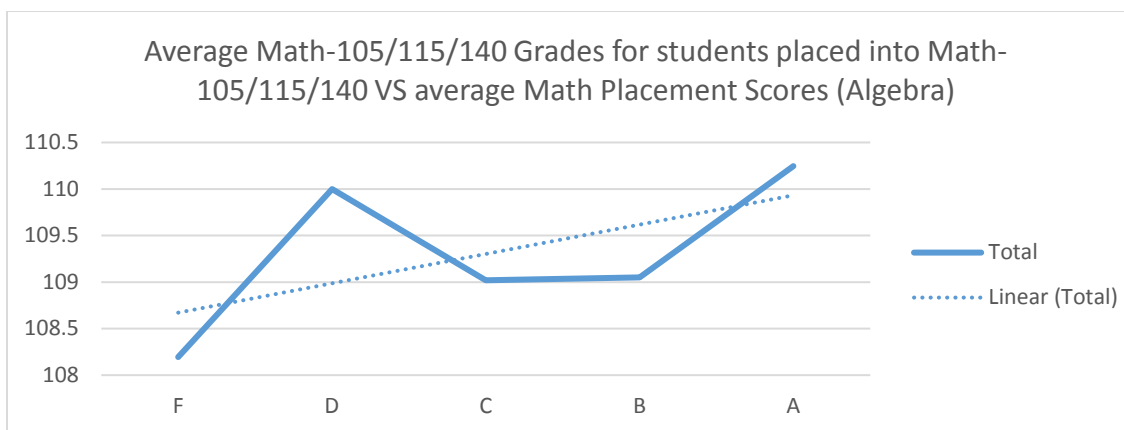
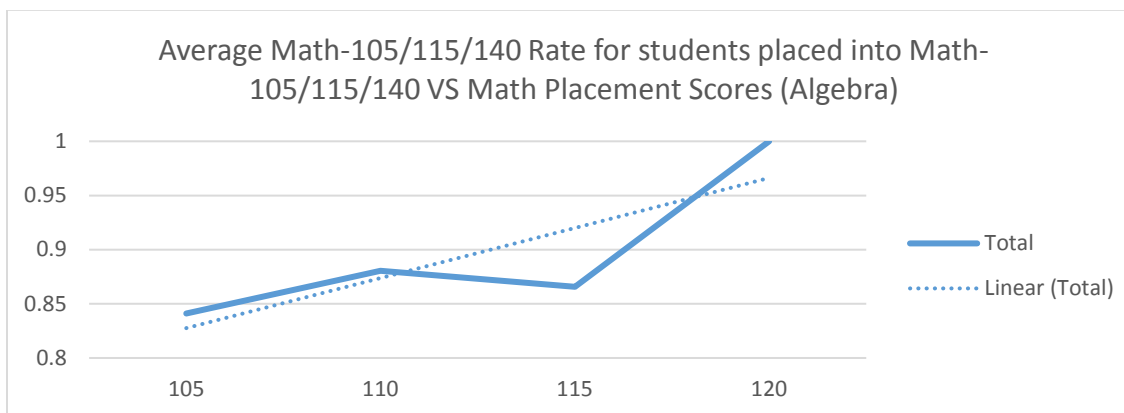
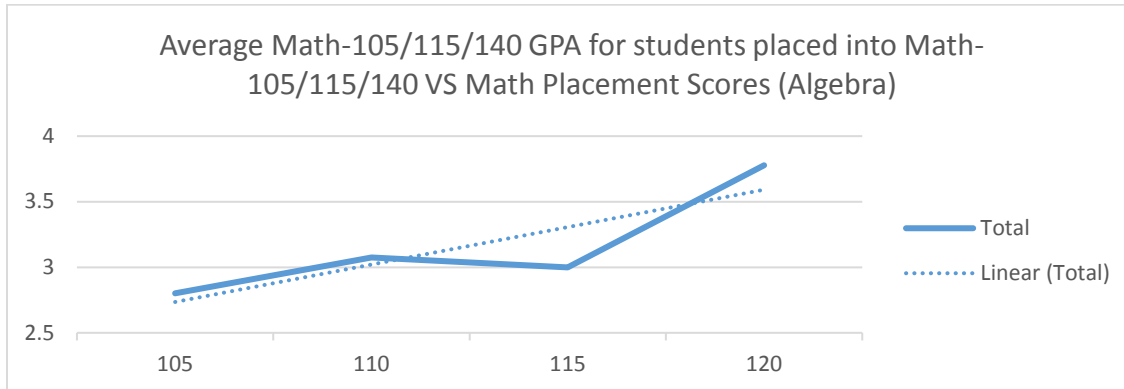
Math-096/096A Accuplacer Algebra with a cut score of 63 to 103, had an average group score of 79.31. Those students receiving a C or better had an average score range of 79 to 83. Average GPA range was 1.88 to 3.75 with an overall average of 2.26. The average success rate range was 66.7% to 100% with an overall success rate average of 72.5%.

Headcount	Average GPA	Average Success Rate	Average Score
5,285	2.26	72.5%	79.31



Math-105/115/140 Accuplacer Algebra with a cut score of 104 to 120, had an average group score of 109.68. Those students receiving a C or better had an average score range of 109 to 111. Average GPA range was 2.80 to 3.78 with an overall average of 2.98. The average success rate range was 84.1% to 100% with an overall success rate average of 86.8%.

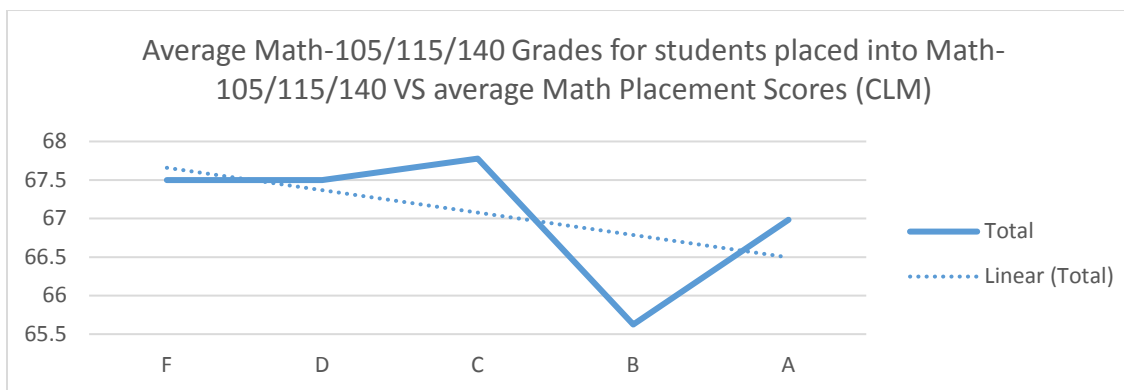
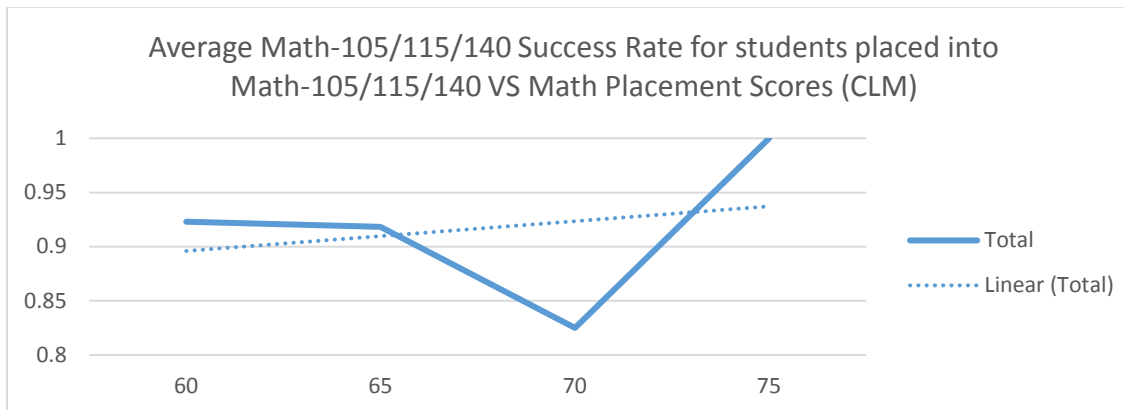
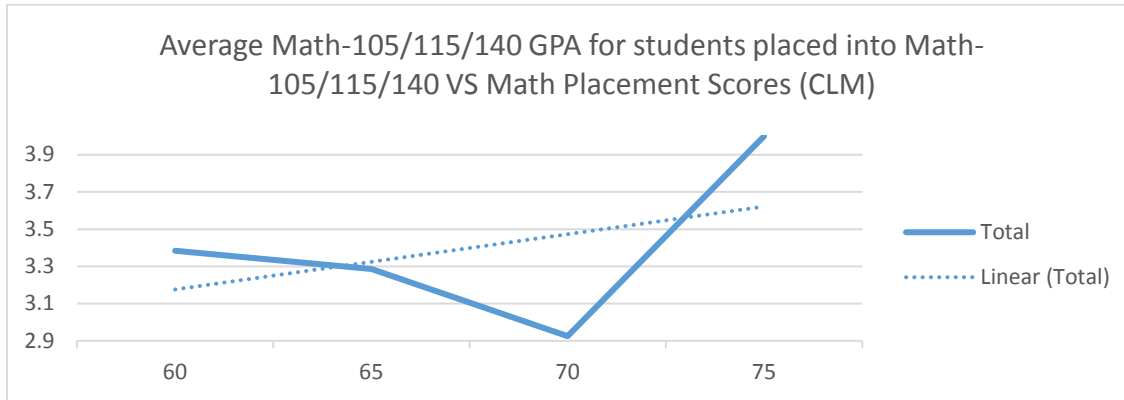
Headcount	Average GPA	Average Success Rate	Average Score
373	2.98	86.8%	109.68





Math-105/115/140 Accuplacer College Level Math with a cut score of 62 to 76, had an average group score of 66.82. Those students receiving a C or better had an average score range of 65 to 67. Average GPA range was 2.93 to 4.00 with an overall average of 3.20. The average success rate range was 82.5% to 100% with an overall success rate average of 88.9%.

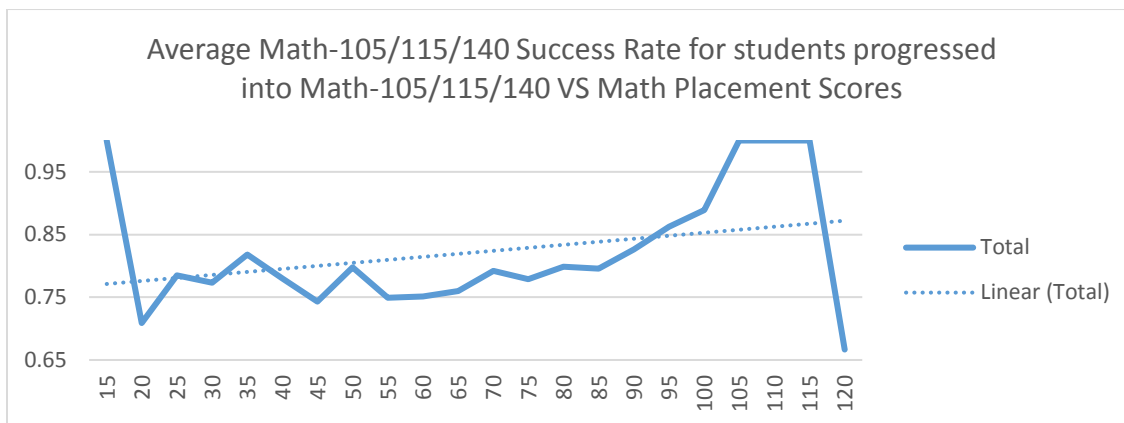
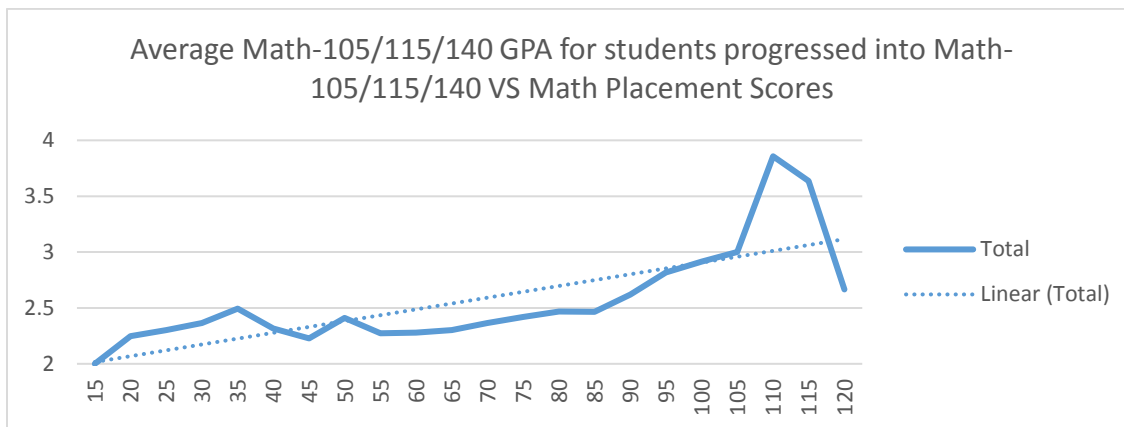
Headcount	Average GPA	Average Success Rate	Average Score
104	3.20	88.9%	66.82



Students who matriculated into CLM of MATH-105/105H/115/140 hold to the trend of better placements leads to better grades. Average GPA range was 2.00 to 3.86 with an overall average of 2.42. The average success rate range was 66.7% to 100% with an overall success rate average of 78.7%.

Once the student reached CLM the success rates ran at 78.7% with an average GPA of 2.42. Students directly placing into CLM performed better than those matriculating into CLM with an average GPA of 2.98 to 3.20 for direct placement students compared to 2.42 for matriculated students and an average success rate of 86.8% to 88.9% for direct placement students versus 78.7% average success rate for matriculated students. For the overall population there were 477 students (373 Algebra Placement + 104 CLM Placement) that placed directly into CLM versus 7,313 students that matriculated into CLM, this indicates that the path to college level math is primarily done through matriculation.

Headcount	Average GPA	Average Success Rate
7,313	2.42	78.7%



#### Cut Score Summary-

Students are more likely to matriculate into College Level Math 7,313 versus 477 direct placement CLM. Students who place high perform well, those who direct place at lower levels, Success Rate is above 70% and average GPA is above 2.00. Lower results in a given cut area indicate a lower success rate, earning a lower grade.