

# Course Placement Service Report



**SOUTHERN ARKANSAS UNIVERSITY (0142)**  
**Magnolia, AR**

**Placement Group:** OUT-OF-STATE

**Subject Area:** Mathematics

**Data Cohort:** 20142015

**Date of Report:** August 10, 2016

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**Mathematics**

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# **Course Placement Report**

Information for Making Placement Decisions

**Placement Group:** OUT-OF-STATE

### Summary of Placement Variables

This table summarizes the placement variables used in requested analyses for each reference course. The table shows number of students, mean value, and standard deviation.

The descriptive statistics for course completers are based on students who receive A-F grades. However, if you chose to treat W grades as unsuccessful outcomes, the statistics will also include students with W grades.

		OUT-OF-STATE			Students who completed course		
Reference course	Placement variable	N	Mean	SD	N	Mean	SD
CLG ALG/MTH LITERA	ACT Mathematics Score	188	20.3	4.3	82	19.7	3.4
	High School Mathematics Grade Average	168	3.2	0.7	77	3.1	0.6
	ACT Mathematics Score and High School Mathematics Grade Average	168	20.5 3.2	4.3 0.7	77	19.9 3.1	3.4 0.6

### Summary of Course Outcomes

This table summarizes the course outcomes used in requested analyses for each reference course.

The table shows number of students, mean course grade, standard deviation, percent B or higher, percent C or higher, total of just W and I grades, and W grades not treated as successful.

		Grades used in analysis						
Reference course	Placement variable	N	Mean	SD	Percent B or higher	Percent C or higher	Total of W and I grades	W grades treated as not successful
CLG ALG/MTH LITERA	ACT Mathematics Score	82	2.6	1.3	62	82	3	Yes
	High School Mathematics Grade Average	77	2.6	1.2	65	84	3	Yes
	ACT Mathematics Score and High School Mathematics Grade Average	77	2.6	1.2	65	84	3	Yes

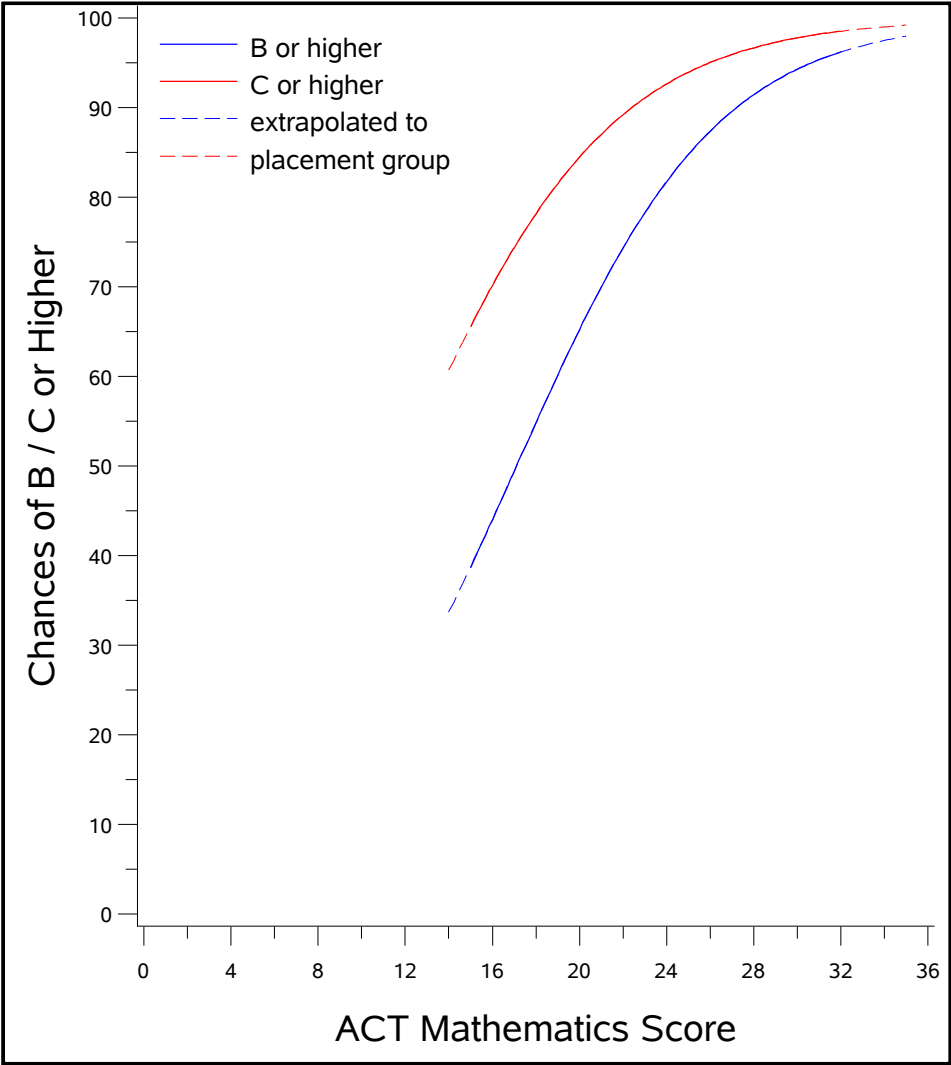
This table and graph report students' chances of achieving a B / C or higher in CLG ALG/MTH LITERA, given their ACT Mathematics Score. For example, the chance that a student with an ACT Mathematics Score of 25 would obtain a B or higher in CLG ALG/MTH LITERA is 85%.

If present, the boldface scores labeled as Opt. B and Opt. C in the table show the cutoff scores that are associated with the maximum accuracy rate. The information in the table and graph can be used to advise students about their chances of success in CLG ALG/MTH LITERA.

Chance of Success in CLG ALG/MTH LITERA,  
Given ACT Mathematics Score

ACT Mathematics Score		Chance of success (B or higher)	Chance of success (C or higher)
Opt. B	35	98	99
	32	96	99
	31	95	98
	30	94	98
	29	93	97
	28	91	97
	27	90	96
	26	87	95
	25	85	94
	24	82	93
	23	78	91
	22	74	89
	21	70	87
	20	65	84
	19	60	82
	<b>18</b>	55	78
	17	49	74
	16	44	70
	15	39	66
	14	34	61

Chance of Success in CLG ALG/MTH LITERA,  
Given ACT Mathematics Score



### Placement Information for CLG ALG/MTH LITERA Using ACT Mathematics Score

This table shows the effects of using different ACT Mathematics Score cutoffs in CLG ALG/MTH LITERA. For example, if you were to require students to have an ACT Mathematics Score of at least 25 to be placed into CLG ALG/MTH LITERA, then you would expect:

- about 82% of your students would be placed in a lower-level course
- about 50% of your placement decisions would be correct
- about 89% of those placed in CLG ALG/MTH LITERA would obtain a B or higher

ACT Mathematics Score			B or higher		C or higher	
		Percent placed in lower-level course	Accuracy rate	Success rate	Accuracy rate	Success rate
	35	99	37	98	19	99
	32	99	37	97	19	99
	31	98	38	97	20	99
	30	97	39	95	21	98
	29	96	40	95	22	98
	28	95	41	94	23	98
	27	92	43	93	26	97
	26	87	47	91	30	96
	25	82	50	89	34	96
	24	72	57	86	43	95
	23	68	59	85	47	94
	22	63	61	84	50	94
	21	57	64	82	55	93
	20	51	66	80	59	92
	19	45	67	78	63	90
Opt. B	18	37	68	75	67	89
	17	24	68	71	73	86
	16	9	66	66	79	84
	15	1	64	64	82	82
	14		64	64	82	82

If present, the shaded rows highlight the optimal cutoff scores (i.e., those that lead to the highest percentage of correct placement decisions).

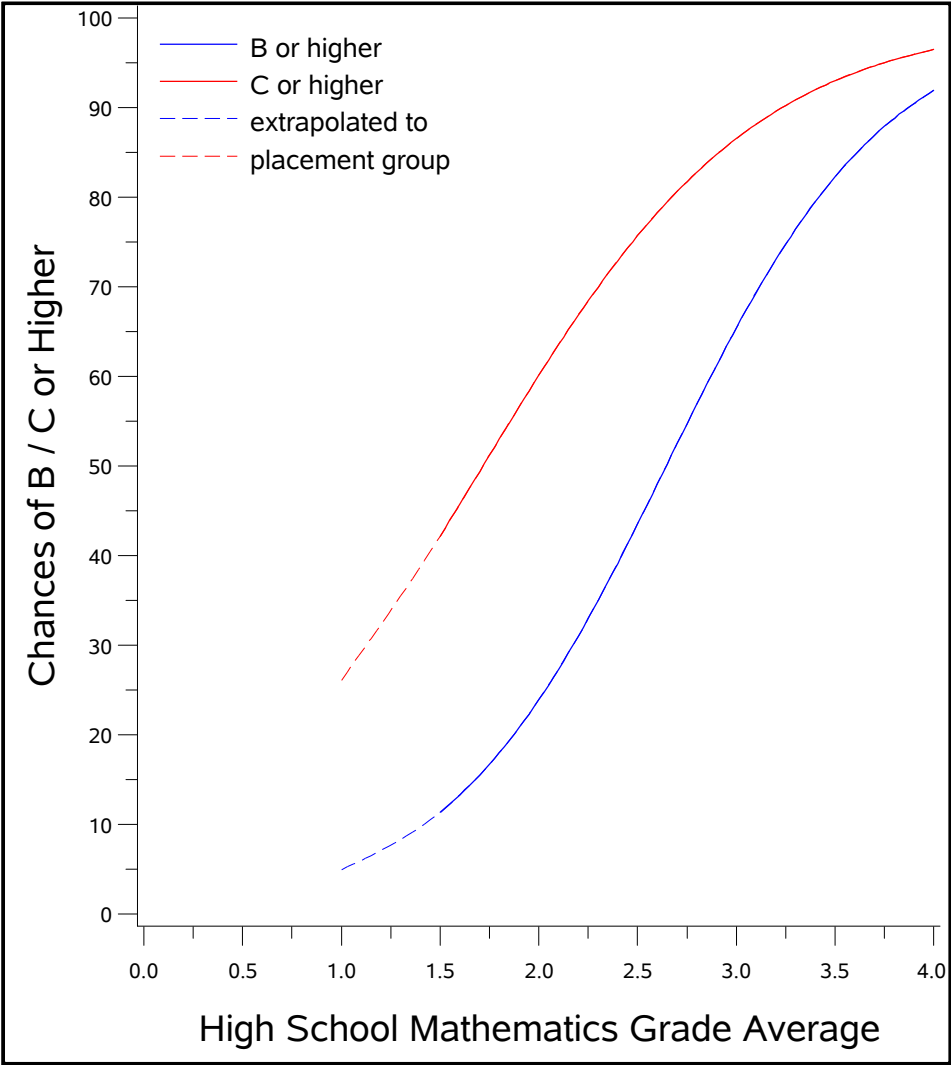
This table and graph report students' chances of achieving a B / C or higher in CLG ALG/MTH LITERA, given their High School Mathematics Grade Average. For example, the chance that a student with a High School Mathematics Grade Average of 2.5 would obtain a B or higher in CLG ALG/MTH LITERA is 44%.

If present, the boldface scores labeled as Opt. B and Opt. C in the table show the cutoff scores that are associated with the maximum accuracy rate. The information in the table and graph can be used to advise students about their chances of success in CLG ALG/MTH LITERA.

Chance of Success in CLG ALG/MTH LITERA,  
Given High School Mathematics Grade Average

High School Mathematics Grade Average		Chance of success (B or higher)	Chance of success (C or higher)
Opt. B	4.0	92	96
	3.8	89	95
	3.7	87	95
	3.6	85	94
	3.5	82	93
	3.4	80	92
	3.3	76	91
	3.2	73	90
	3.0	65	87
	2.8	57	83
	<b>2.7</b>	52	81
	2.5	44	76
	2.3	35	70
Opt. C	2.2	31	67
	2.0	24	60
	<b>1.8</b>	18	53
	1.7	16	49
	1.5	11	42
	1.0	5	26

Chance of Success in CLG ALG/MTH LITERA,  
Given High School Mathematics Grade Average





### Placement Information for CLG ALG/MTH LITERA Using High School Mathematics Grade Average

This table shows the effects of using different High School Mathematics Grade Average cutoffs in CLG ALG/MTH LITERA. For example, if you were to require students to have a High School Mathematics Grade Average of at least 2.5 to be placed into CLG ALG/MTH LITERA, then you would expect:

- about 17% of your students would be placed in a lower-level course
- about 77% of your placement decisions would be correct
- about 78% of those placed in CLG ALG/MTH LITERA would obtain a B or higher

High School Mathematics Grade Average			B or higher		C or higher	
		Percent placed in lower-level course	Accuracy rate	Success rate	Accuracy rate	Success rate
	4.0	76	52	92	37	96
	3.8	68	57	91	44	96
	3.7	65	60	91	47	96
	3.6	64	61	91	48	96
	3.5	55	66	89	55	95
	3.4	53	68	89	57	95
	3.3	48	70	87	61	95
	3.2	46	71	87	62	95
	3.0	26	77	81	78	92
	2.8	25	77	81	78	92
Opt. B	<b>2.7</b>	<b>21</b>	<b>78</b>	<b>79</b>	81	92
	2.5	17	77	78	82	91
	2.3	11	75	75	85	89
	2.2	10	75	74	85	89
Opt. C	<b>2.0</b>	<b>4</b>	<b>72</b>	<b>71</b>	<b>86</b>	<b>88</b>
	<b>1.8</b>	<b>4</b>	<b>72</b>	<b>71</b>	<b>86</b>	<b>87</b>
	1.7	3	71	71	86	87
	1.5	1	70	69	86	86
	1.0		69	69	86	86

If present, the shaded rows highlight the optimal cutoff scores (i.e., those that lead to the highest percentage of correct placement decisions).

### Chance of a B or Higher in CLG ALG/MTH LITERA, Given ACT Mathematics Score and High School Mathematics Grade Average

The matrix reports students' chances of achieving a B or higher in CLG ALG/MTH LITERA, given their ACT Mathematics Score and High School Mathematics Grade Average. For example, the chance that a student with an ACT Mathematics Score of 17 and a High School Mathematics Grade Average of 2.2 would obtain a B or higher in CLG ALG/MTH LITERA is 30%.

If present, the dark gold area shows the combinations of ACT Mathematics Score and High School Mathematics Grade Average values that are at or near a 50% chance level. The combinations that maximize the percentage of correct placement decisions (accuracy rate) always correspond to a chance of 50%.

High School Mathematics Grade Average

4.0	73	75	76	77	78	80	81	82	83	84	85	85	86	87	88	89	89	90	90	91	92	92	93	93	93	94	94	95	95	95	96	96	96	96	97	97
3.9	70	71	73	74	75	77	78	79	80	81	82	83	84	85	86	87	88	88	89	90	90	91	91	92	92	93	93	94	94	94	95	95	95	96	96	96
3.8	66	68	69	71	72	74	75	76	77	79	80	81	82	83	84	85	86	86	87	88	89	89	90	91	91	92	92	93	93	94	94	94	95	95	95	96
3.7	63	64	66	67	69	70	72	73	74	76	77	78	79	80	81	82	83	84	85	86	87	88	88	89	90	90	91	91	92	93	93	93	94	94	95	95
3.6	59	60	62	64	65	67	68	70	71	73	74	75	76	78	79	80	81	82	83	84	85	86	87	87	88	89	89	90	91	91	92	92	93	93	94	94
3.5	55	56	58	60	61	63	65	66	68	69	71	72	73	75	76	77	78	80	81	82	83	84	85	85	86	87	88	89	89	90	90	91	92	92	93	93
3.4	51	52	54	56	57	59	61	62	64	65	67	69	70	71	73	74	75	77	78	79	80	81	82	83	84	85	86	87	88	88	89	90	90	91	91	92
3.3	46	48	50	52	53	55	57	58	60	62	63	65	66	68	69	71	72	74	75	76	77	79	80	81	82	83	84	85	86	86	87	88	89	89	90	91
3.2	42	44	46	47	49	51	53	54	56	58	59	61	63	64	66	67	69	70	72	73	74	76	77	78	79	80	81	82	83	84	85	86	87	88	88	89
3.1	38	40	42	43	45	47	48	50	52	54	55	57	59	60	62	64	65	67	68	70	71	73	74	75	76	78	79	80	81	82	83	84	85	86	87	87
3.0	35	36	38	39	41	43	44	46	48	50	51	53	55	56	58	60	61	63	65	66	68	69	71	72	73	75	76	77	78	80	81	82	83	84	85	85
2.9	31	32	34	35	37	39	40	42	44	45	47	49	51	52	54	56	57	59	61	62	64	66	67	69	70	71	73	74	75	77	78	79	80	81	82	83
2.8	27	29	30	32	33	35	36	38	40	41	43	45	46	48	50	52	53	55	57	58	60	62	63	65	66	68	69	71	72	74	75	76	77	79	80	81
2.7	24	26	27	28	30	31	33	34	36	37	39	41	42	44	46	47	49	51	53	54	56	58	59	61	63	64	66	67	69	70	72	73	74	76	77	78
2.6	21	23	24	25	26	28	29	31	32	34	35	37	38	40	42	43	45	47	48	50	52	54	55	57	59	60	62	64	65	67	68	70	71	73	74	75
2.5	19	20	21	22	23	25	26	27	29	30	32	33	35	36	38	39	41	43	44	46	48	50	51	53	55	56	58	60	61	63	65	66	68	69	71	72
2.4	16	17	18	19	21	22	23	24	25	27	28	29	31	32	34	36	37	39	40	42	44	45	47	49	51	52	54	56	57	59	61	62	64	66	67	69
2.3	14	15	16	17	18	19	20	21	22	24	25	26	28	29	30	32	33	35	36	38	40	41	43	45	46	48	50	52	53	55	57	58	60	62	63	65
2.2	12	13	14	15	16	17	18	19	20	21	22	23	24	26	27	28	30	31	33	34	36	37	39	41	42	44	46	47	49	51	53	54	56	58	59	61
2.1	11	11	12	13	14	14	15	16	17	18	19	20	21	23	24	25	26	28	29	31	32	34	35	37	38	40	42	43	45	47	49	50	52	54	55	57
2.0	9	10	10	11	12	12	13	14	15	16	17	18	19	20	21	22	23	25	26	27	29	30	32	33	35	36	38	39	41	43	44	46	48	50	51	53
1.9	8	8	9	10	10	11	11	12	13	14	15	15	16	17	18	19	21	22	23	24	25	27	28	29	31	32	34	36	37	39	40	42	44	45	47	49
1.8	7	7	8	8	9	9	10	11	11	12	13	13	14	15	16	17	18	19	20	21	22	24	25	26	28	29	30	32	33	35	36	38	40	41	43	45
1.7	6	6	7	7	8	8	9	9	10	10	11	12	12	13	14	15	16	17	18	19	20	21	22	23	24	26	27	28	30	31	33	34	36	37	39	41
1.6	5	5	6	6	6	7	7	8	8	9	9	10	11	11	12	13	14	14	15	16	17	18	19	20	21	23	24	25	26	28	29	31	32	34	35	37
1.5	4	5	5	5	6	6	6	7	7	8	8	9	9	10	10	11	12	13	13	14	15	16	17	18	19	20	21	22	23	25	26	27	29	30	32	33
1.4	4	4	4	4	5	5	5	6	6	7	7	7	8	8	9	10	10	11	11	12	13	14	15	15	16	17	18	19	21	22	23	24	25	27	28	30
1.3	3	3	4	4	4	4	5	5	5	6	6	6	7	7	8	8	9	9	10	11	11	12	13	13	14	15	16	17	18	19	20	21	22	24	25	26
1.2	3	3	3	3	3	4	4	4	4	5	5	5	6	6	7	7	8	8	9	9	10	10	11	12	12	13	14	15	16	17	18	19	20	21	22	23
1.1	2	2	3	3	3	3	3	4	4	4	4	5	5	5	6	6	6	7	7	8	8	9	9	10	11	11	12	13	14	15	16	17	18	19	20	
1.0	2	2	2	2	2	3	3	3	3	3	4	4	4	5	5	5	6	6	6	7	7	8	8	9	9	10	10	11	12	13	13	14	15	16	17	18
0.9	2	2	2	2	2	2	2	3	3	3	3	3	4	4	4	4	5	5	5	6	6	7	7	8	8	9	10	10	11	11	12	13	14	15	15	
0.8	1	1	2	2	2	2	2	2	2	3	3	3	3	3	4	4	4	4	5	5	5	6	6	6	7	7	8	8	9	9	10	11	11	12	13	13
0.7	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	4	4	4	4	5	5	5	6	6	7	7	8	8	9	9	10	10	11	12
0.6	1	1	1	1	1	1	1	2	2	2	2	2	2	2	3	3	3	3	3	4	4	4	4	5	5	5	6	6	6	7	7	8	8	9	9	10
0.5	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	4	4	4	5	5	5	6	6	6	7	7	8	8	9
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36

ACT Mathematics Score

The matrix reports students' chances of achieving a C or higher in CLG ALG/MTH LITERA, given their ACT Mathematics Score and High School Mathematics Grade Average. For example, the chance that a student with an ACT Mathematics Score of 17 and a High School Mathematics Grade Average of 2.2 would obtain a C or higher in CLG ALG/MTH LITERA is 66%.

High School Mathematics Grade Average

ACT Mathematics Score

**Placement Information for CLG ALG/MTH LITERA Using ACT Mathematics Score and High School Mathematics Grade Average**

This table shows the impact of using different combinations of ACT Mathematics Scores and High School Mathematics Grade Averages as cutoff scores in CLG ALG/MTH LITERA. For example, if you were to require students to have at least a 50% chance of a B or higher based on their ACT Mathematics Scores and High School Mathematics Grade Averages to be placed into CLG ALG/MTH LITERA (see page 9), then you would expect:

- about 21% of your students would be placed in a lower-level course
- about 78% of your placement decisions would be correct
- about 80% of those placed in CLG ALG/MTH LITERA would obtain a B or higher

	B or higher			C or higher		
Chance range	Percent below	Accuracy rate	Success rate	Percent below	Accuracy rate	Success rate
91 - 99	86	43	94	70	42	96
85 - 90	67	59	92	40	67	94
82 - 84	59	65	91	25	79	92
79 - 81	55	67	90	22	80	92
76 - 78	52	69	89	20	81	92
73 - 75	48	71	88	18	82	91
70 - 72	45	72	87	16	83	91
67 - 69	42	74	86	12	85	90
64 - 66	40	75	86	10	85	89
61 - 63	34	76	84	10	85	89
58 - 60	27	78	81	7	86	88
55 - 57	24	78	81	4	86	87
52 - 54	23	78	80	4	86	87
49 - 51	21	78	80	3	86	87
46 - 48	20	78	79	2	86	87
43 - 45	20	78	79	2	86	87
40 - 42	18	78	78	1	86	86
37 - 39	17	77	77	1	86	86
34 - 36	15	77	77	1	86	86
31 - 33	13	77	76	1	86	86
28 - 30	10	75	74	1	86	86
25 - 27	9	74	74	0	85	85
22 - 24	8	74	73			
19 - 21	4	72	71			
16 - 18	4	71	71			
10 - 15	2	71	70			
1 - 9	1	69	69			

If present, the shaded rows highlight the optimal cutoff combinations (i.e., those that lead to the highest percentage of correct placement decisions).

### Logistic Regression Weights and Correlations

This table contains the estimated logistic regression weights used to calculate the chances of success in each course. The weights associated with each set of placement variables are shown with the corresponding significance level (p-value). This information can be used to calculate the chances of success for a given student.

A p-value is an estimate of the probability that a regression weight of magnitude equal to that reported in the table would occur by chance if the true regression weight were 0; the smaller the p-value, the more highly "statistically significant" the regression weight is. The correlation between the placement variables and course grades also is listed.

		B or higher		C or higher		
Course	Placement variable(s)	Logistic regression weight	P-value	Logistic regression weight	P-value	Correlation
CLG ALG/MTH LITERA	Intercept	-3.72		-2.50		
	ACT Mathematics Score	0.22	0.0097	0.21	0.0568	0.35
	Intercept	-4.75		-2.49		
	High School Mathematics Grade Average	1.80	0.0002	1.45	0.0091	0.50
	Intercept	-5.66		-2.90		
	ACT Mathematics Score and High School Mathematics Grade Average	0.07 1.65	0.4709 0.0015	0.03 1.39	0.8029 0.0221	0.51