

# PROFICIENCY PROFILE

## ANNUAL REPORT

*VOLUME I*

*2014—2015*



## Volume One

# Troy University Proficiency Profile Annual Report

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Proficiency Profile 2014 - 2015

Submitted  
to  
Hal Fulmer, Dean  
First-Year Studies  
Troy University-Center for Student Success  
Troy, Alabama

By

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October 31, 2015

The report examines general education assessment to ensure a cycle of continuous improvement in teaching and learning. To complete the analysis of results from the Proficiency Profile (Measure of Academic Proficiency and Progress) Assessment.

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## ABSTRACT

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### Dothan, Montgomery, Phenix City, Troy Global (Onsite), and eTroy (Online) Distance Learning

The test is designed to evaluate the performance of the university's general studies program. It is assumed that by the end of the sophomore year the typical student has taken the majority of their general studies classes. The test is designed to highlight any changes that need to be made to improve the general studies experience or to fill in any holes there may be in the general studies experience. The school is not interested so much in individual scores as in the overall scores of the students in different areas. It is for this reason the Proficiency Profile test is given at the end of the sophomore year. Associates level students take the test after completion of 48 hours and prior to graduation (exit exam), and bachelors level students 60-89 hours.

### Troy Campus

Students on the Troy campus are required to take the Proficiency Profile exam, which is an assessment of the students' current skill level in reading, critical thinking, writing, and mathematics. As an ongoing effort of the university's mission to help students achieve academic excellence and successful degree completion, this process will play a major role toward achieving these goals. The goals of the university will serve to benefit students' academic goals and successes at TROY.

## Pre-test the following groups as entering freshmen:

- 1) Leadership Scholarship Recipients (Minimum 22 ACT)
    - a. Completion of the Proficiency Profile exam will be a requirement for receiving the scholarship.
  - 2) Conditionally Admitted Students (Below 20 ACT)
    - a. Completion of the Proficiency Profile exam will be a requirement for conditional admits.
  - 3) The Millennium Scholar's Award (Minimum 31 ACT)
    - a. Completion of the Proficiency Profile exam will be a requirement for receiving the scholarship.
  - 4) The Chancellor's Scholar's Award (Minimum 27 ACT)
    - a. Completion of the Proficiency Profile exam will be a requirement for receiving the scholarship.
- 
- I. The Pre exam will begin Fall 2014 with students completing the exam prior to the end of their first semester. The Post exam will be administered, during the Spring semester after the student has obtained at least 60 hours.
  - II. Requirement of the exam for Associate level degree students for Montgomery and Global Campus as an exit exam will continue.
  - III. The exam on the Montgomery, Dothan, Phenix City, and Global Campuses will continue to be given to rising juniors who have completed between 60-89 hours.

## Pre Analysis (Understanding This Report)

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### Using Scores and Reports

Troy University Department of IRPE uses the Proficiency Profile scores to:

- gauge student learning outcomes of traditional, blended learning and distance learning students
- measure and document program effectiveness to meet requirements for accreditation and program funding
- assess student proficiency in core academic skill areas to identify strengths, weaknesses and opportunities to improve curriculum
- compare Troy's own performance against the performance of their peers

### Scores Reported

#### Norm-referenced Scores (Scaled Scores)

Eight scaled scores are reported for students taking the Proficiency Profile test:

- a total score
- four skills subscores (critical thinking, reading, writing, mathematics)
- three context-based subscores (humanities, social sciences, natural sciences)

The total score is reported on a scale that extends from 400 to 500. The seven subscores are reported on a scale that extends from 100 to 130.

#### Criterion-referenced Scores (Proficiency Classifications)

In addition to a total score, proficiency classifications (proficient, marginal or not proficient) measure how well your students have mastered each level of proficiency within three skill areas:

- Reading/Critical Thinking
- Writing
- Mathematics

Within each of these three skill areas, the specific skills tested by the Proficiency Profile test are classified into three proficiency levels, identified simply as Level 1, Level 2 and Level 3. Each proficiency level is defined in terms of a set of specific competencies expected of students.

## Comparative Data Reports

Proficiency Profile Comparative Data Guide (CDG) provides invaluable information. This data is used to compare the scores and proficiency classifications of Troy students with those of a large group of students at other institutions.

The annual CDG contains tables of scaled scores and percentiles for individual student scores and institutional means drawn directly from test takers across the nation. The CDG also provides percentiles for individual student subscores and a summary of proficiency classifications. Statistics are provided by class level (freshman, sophomore, etc.) and institution type and include a demographic summary.



## Analysis

### Summary of Scaled Scores *(All Students)*

**Number of students tested:** 671

**Number of students included in these statistics:** 650

Total Score for the Proficiency Profile 2014-2015 is 443.94, which is an increase of  $\frac{56149}{50000}$  or 1.12% from the previous academic year.

	Possible Range	Mean Score	National Mean Score	95% Confidence Limits* for Mean	Standard Deviation	25th Percentile	50th Percentile	75th Percentile
<b>Total Score</b>								
<b>Total Score</b>	400 to 500	443.94	441.04	443 to 445	18.54	430	444	457
<b>Skills Subscores</b>								
<b>Critical Thinking</b>	100 to 130	111.41	110.98	111 to 112	6.28	106	111	116
<b>Reading</b>	100 to 130	117.44	116.97	117 to 118	7.26	112	119	123
<b>Writing</b>	100 to 130	115.17	113.82	114 to 116	4.66	112	116	119
<b>Mathematics</b>	100 to 130	112.94	112.39	112 to 114	5.74	109	112	117
<b>Context-Based Subscores</b>								
<b>Humanities</b>	100 to 130	115.19	115.09	114 to 116	6.52	110	115	121
<b>Social Sciences</b>	100 to 130	112.93	113.22	112 to 114	6.35	108	112	118
<b>Natural Sciences</b>	100 to 130	115.51	114.54	115 to 116	6.11	110	117	120

\*The confidence limits are based on the assumption that the questions contributing to each scaled score are a sample from a much larger set of possible questions that could have been used to measure those same skills. If the group of students taking the test is a sample from some larger population of students eligible to be tested, the confidence limits include both sampling of students and sampling of questions as factors that could cause the mean score to vary. The confidence limits indicate the precision of the mean score of the students actually tested, as an estimate of the "true population mean" - the mean score that would result if all the students in the population could somehow be tested with all possible questions. These confidence limits were computed by a procedure that has a 95 percent probability of producing upper and lower limits that will surround the true population mean. The population size used in the calculation of the confidence limits for the mean scores in this report is 650.

Reports based on a sample of fewer than 50 test takers are representative of the performance of **that sample only**. Reports based on **fewer than 50 test takers** should not be considered representative of the larger group of like students, and inferences or generalizations about the larger population or subgroup **should not** be made based on such small samples.

## More than 90 semester hours

	Possible Range	Mean Score	95% Confidence Limits* for Mean	Standard Deviation	25th Percentile	50th Percentile	75th Percentile
<b>Total Score</b>							
<b>Total Score</b>	400 to 500	440.00	437 to 443	18.28	423	442	455
<b>Skills Subscores</b>							
<b>Critical Thinking</b>	100 to 130	110.89	109 to 113	5.11	107	110	115
<b>Reading</b>	100 to 130	116.39	115 to 118	8.14	110	118	124
<b>Writing</b>	100 to 130	113.82	112 to 115	4.34	111	114	117
<b>Mathematics</b>	100 to 130	111.61	110 to 113	6.55	108	111	115
<b>Context-Based Subscores</b>							
<b>Humanities</b>	100 to 130	114.43	113 to 116	6.47	110	114	120
<b>Social Sciences</b>	100 to 130	112.54	111 to 114	5.92	108	112	118
<b>Natural Sciences</b>	100 to 130	114.68	113 to 116	5.62	110	116	120

\*The confidence limits are based on the assumption that the questions contributing to each scaled score are a sample from a much larger set of possible questions that could have been used to measure those same skills. If the group of students taking the test is a sample from some larger population of students eligible to be tested, the confidence limits include both sampling of students and sampling of questions as factors that could cause the mean score to vary. The confidence limits indicate the precision of the mean score of the students actually tested, as an estimate of the "true population mean" - the mean score that would result if all the students in the population could somehow be tested with all possible questions. These confidence limits were computed by a procedure that has a 95 percent probability of producing upper and lower limits that will surround the true population mean. The population size used in the calculation of the confidence limits for the mean scores in this report is 28.

Reports based on a sample of fewer than 50 test takers are representative of the performance of **that sample only**.

Reports based on **fewer than 50 test takers** should not be considered representative of the larger group of like students, and inferences or generalizations about the larger population or subgroup **should not** be made based on such small samples.

## 61 – 90 semester hours

	Possible Range	Mean Score	95% Confidence Limits* for Mean	Standard Deviation	25th Percentile	50th Percentile	75th Percentile
<b>Total Score</b>							
<b>Total Score</b>	400 to 500	436.76	434 to 439	19.29	426	431	444
<b>Skills Subscores</b>							
<b>Critical Thinking</b>	100 to 130	110.12	109 to 112	5.46	107	109	112
<b>Reading</b>	100 to 130	115.54	114 to 117	7.44	108	115	123
<b>Writing</b>	100 to 130	113.61	112 to 115	4.68	110	113	117
<b>Mathematics</b>	100 to 130	109.63	108 to 111	6.24	106	108	111
<b>Context-Based Subscores</b>							
<b>Humanities</b>	100 to 130	114.56	113 to 116	6.84	110	114	120
<b>Social Sciences</b>	100 to 130	111.24	110 to 113	6.16	106	110	114
<b>Natural Sciences</b>	100 to 130	113.98	113 to 115	4.99	110	114	118

\*The confidence limits are based on the assumption that the questions contributing to each scaled score are a sample from a much larger set of possible questions that could have been used to measure those same skills. If the group of students taking the test is a sample from some larger population of students eligible to be tested, the confidence limits include both sampling of students and sampling of questions as factors that could cause the mean score to vary. The confidence limits indicate the precision of the mean score of the students actually tested, as an estimate of the "true population mean" - the mean score that would result if all the students in the population could somehow be tested with all possible questions. These confidence limits were computed by a procedure that has a 95 percent probability of producing upper and lower limits that will surround the true population mean. The population size used in the calculation of the confidence limits for the mean scores in this report is 41.

Reports based on a sample of fewer than 50 test takers are representative of the performance of **that sample only**. Reports based on **fewer than 50 test takers** should not be considered representative of the larger group of like students, and inferences or generalizations about the larger population or subgroup **should not** be made based on such small samples.

## 30 – 60 semester hours

	Possible Range	Mean Score	95% Confidence Limits* for Mean	Standard Deviation	25th Percentile	50th Percentile	75th Percentile
<b>Total Score</b>							
<b>Total Score</b>	400 to 500	440.28	438 to 443	21.93	421	440	453
<b>Skills Subscores</b>							
<b>Critical Thinking</b>	100 to 130	111.03	109 to 113	7.43	104	110	116
<b>Reading</b>	100 to 130	117.44	116 to 119	6.67	113	118	123
<b>Writing</b>	100 to 130	114.22	113 to 116	5.82	110	114	118
<b>Mathematics</b>	100 to 130	110.81	109 to 112	6.46	106	111	114
<b>Context-Based Subscores</b>							
<b>Humanities</b>	100 to 130	115.72	114 to 117	6.96	109	116	121
<b>Social Sciences</b>	100 to 130	112.03	110 to 114	6.94	106	112	116
<b>Natural Sciences</b>	100 to 130	115.38	114 to 117	6.21	111	116	120

\*The confidence limits are based on the assumption that the questions contributing to each scaled score are a sample from a much larger set of possible questions that could have been used to measure those same skills. If the group of students taking the test is a sample from some larger population of students eligible to be tested, the confidence limits include both sampling of students and sampling of questions as factors that could cause the mean score to vary. The confidence limits indicate the precision of the mean score of the students actually tested, as an estimate of the "true population mean" - the mean score that would result if all the students in the population could somehow be tested with all possible questions. These confidence limits were computed by a procedure that has a 95 percent probability of producing upper and lower limits that will surround the true population mean. The population size used in the calculation of the confidence limits for the mean scores in this report is 32.

Reports based on a sample of fewer than 50 test takers are representative of the performance of **that sample only**. Reports based on **fewer than 50 test takers** should not be considered representative of the larger group of like

students, and inferences or generalizations about the larger population or subgroup **should not** be made based on such small samples.

### Fewer than 30 semester hours

	Possible Range	Mean Score	95% Confidence Limits* for Mean	Standard Deviation	25th Percentile	50th Percentile	75th Percentile
<b>Total Score</b>							
<b>Total Score</b>	400 to 500	445.82	444 to 447	20.29	433	445	462
<b>Skills Subscores</b>							
<b>Critical Thinking</b>	100 to 130	112.11	111 to 113	6.86	106	111	117
<b>Reading</b>	100 to 130	117.93	117 to 119	7.58	113	119	125
<b>Writing</b>	100 to 130	115.35	114 to 116	4.83	113	116	119
<b>Mathematics</b>	100 to 130	113.64	113 to 115	6.29	109	113	119
<b>Context-Based Subscores</b>							
<b>Humanities</b>	100 to 130	115.62	114 to 117	6.76	110	116	121
<b>Social Sciences</b>	100 to 130	113.56	112 to 115	6.89	108	114	118
<b>Natural Sciences</b>	100 to 130	115.95	115 to 117	6.45	112	117	121

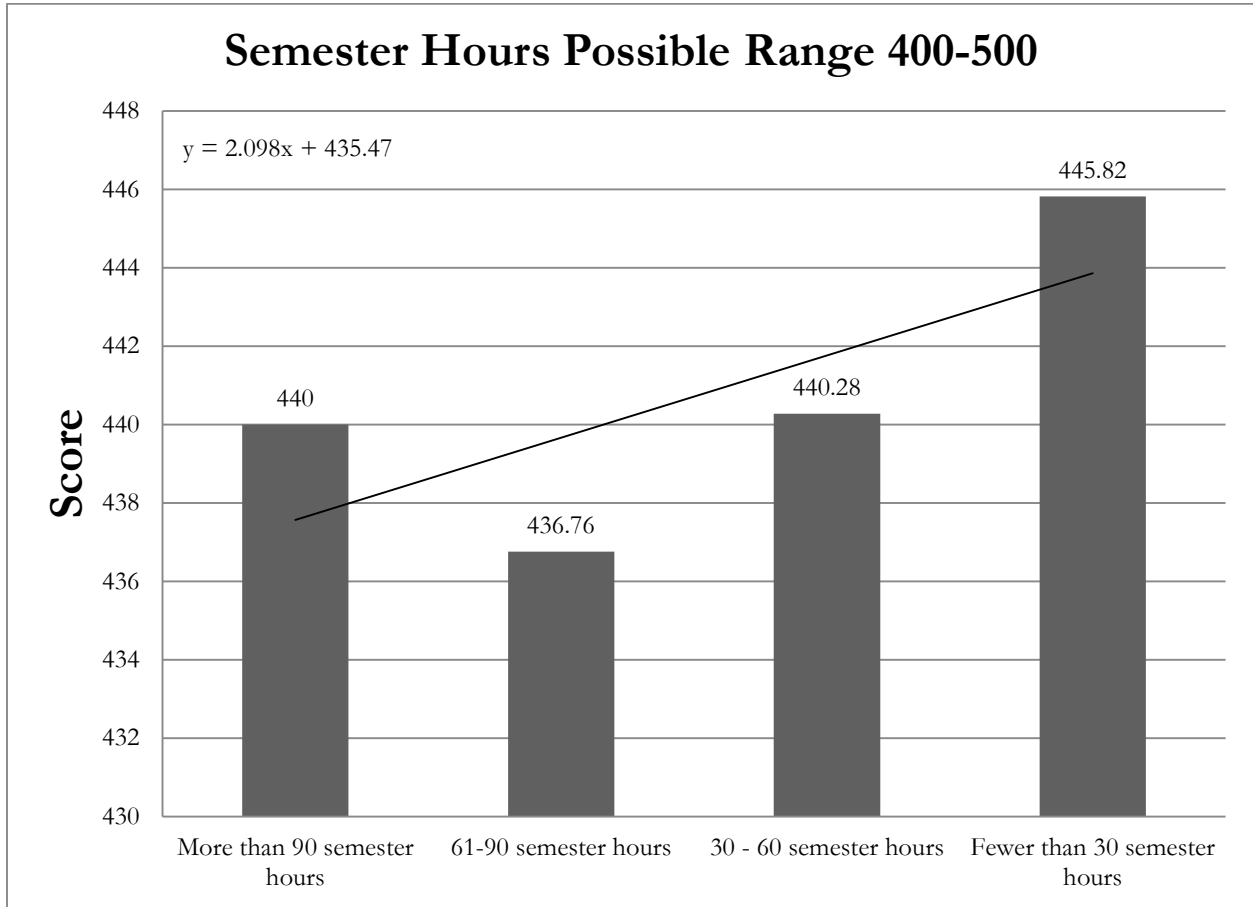


Figure 1



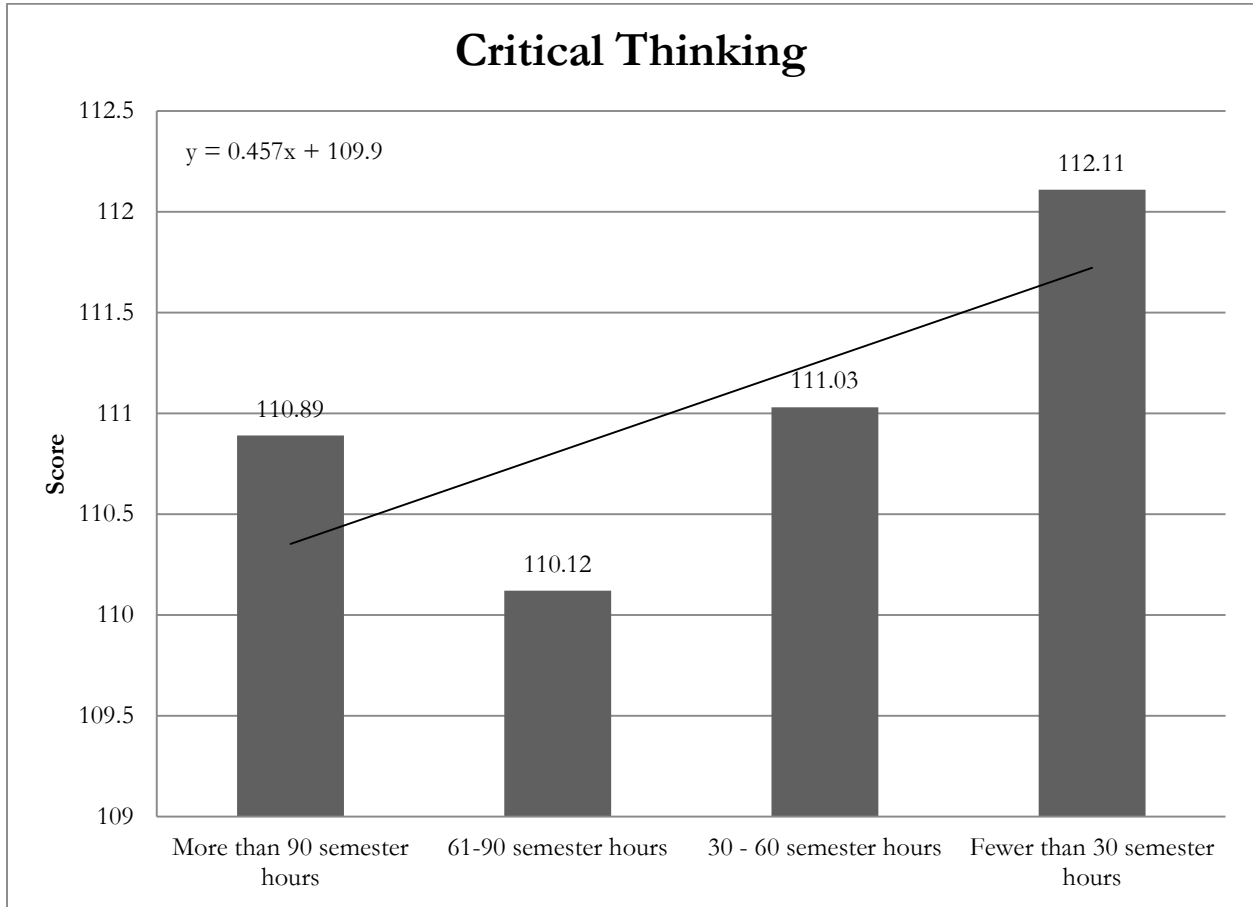


Figure 2

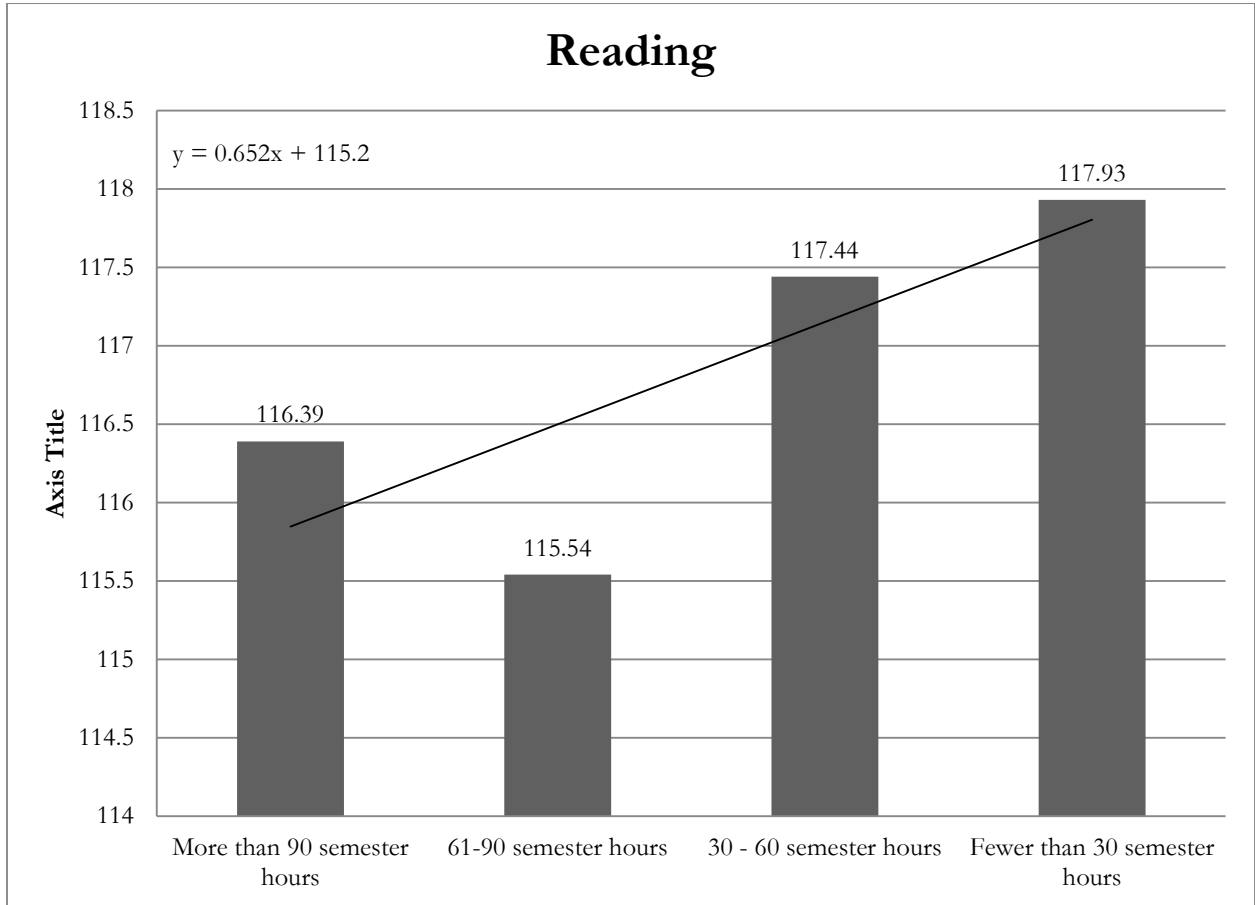


Figure 3

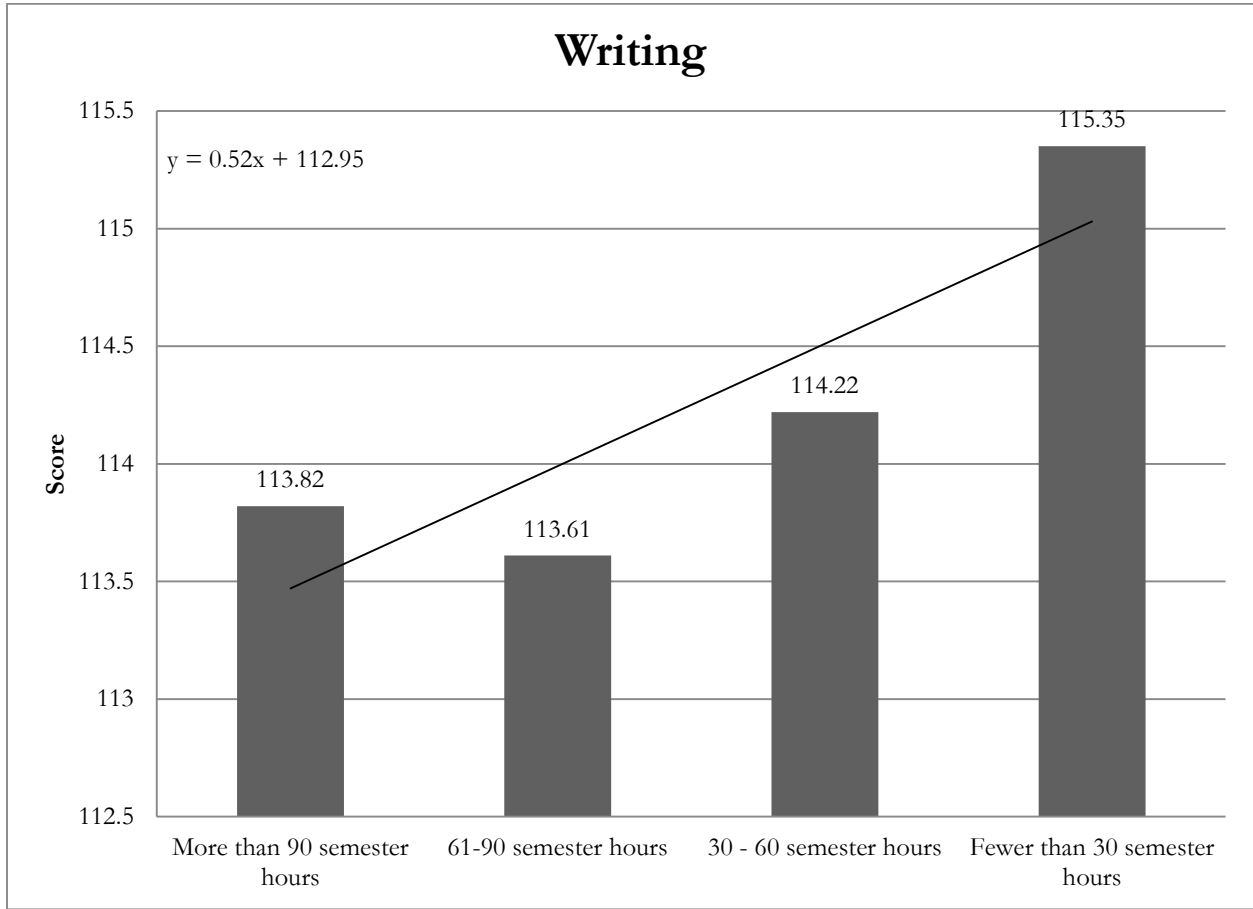


Figure 4

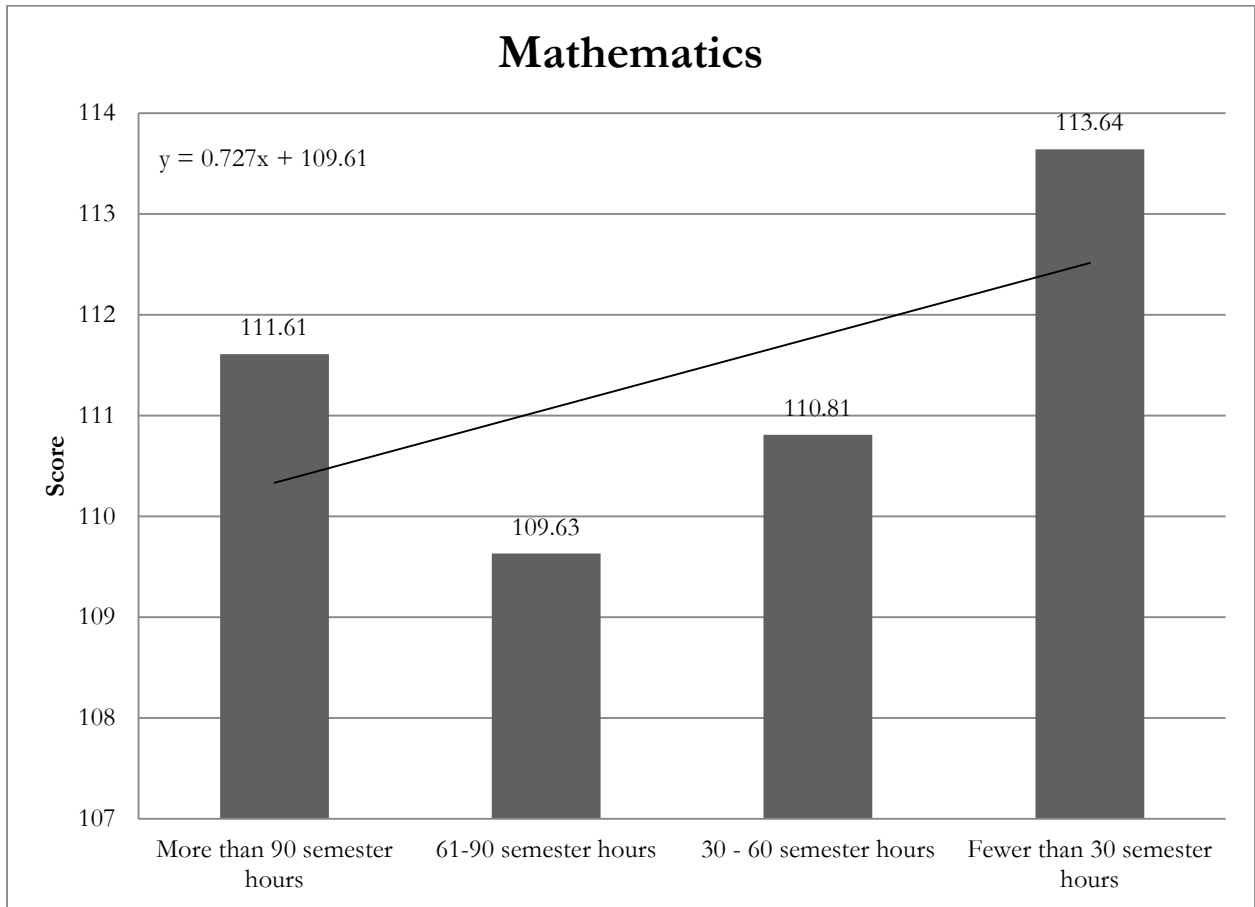


Figure 5

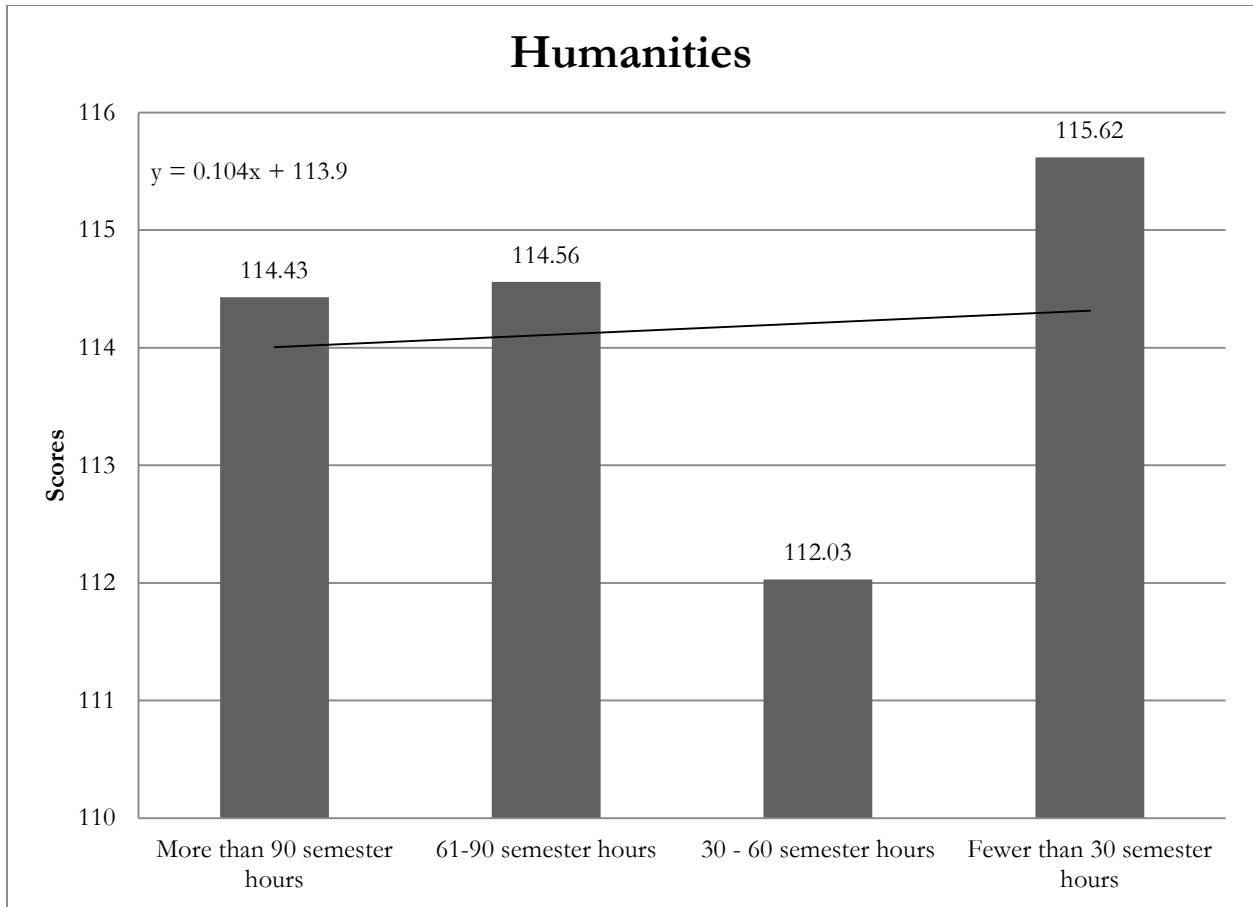


Figure 6

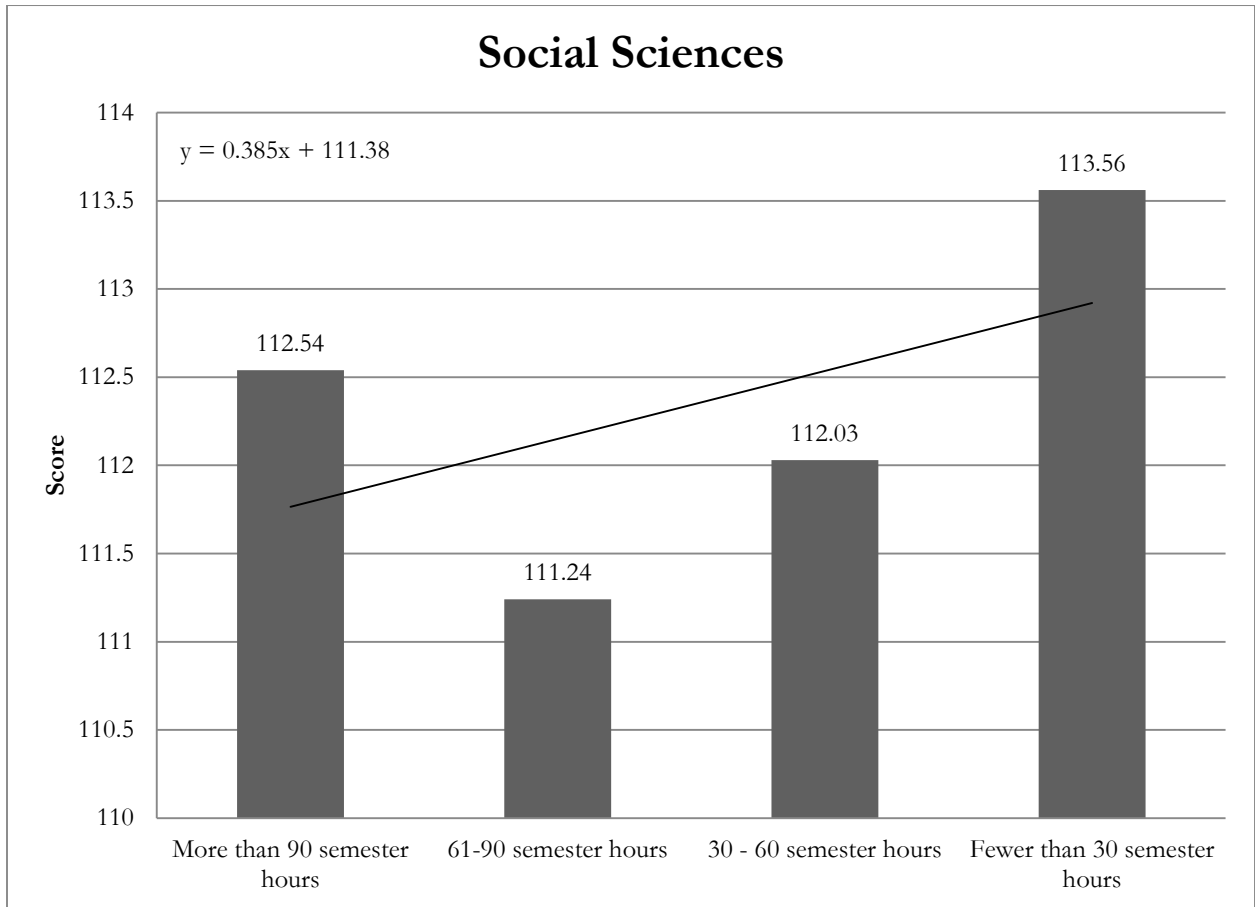


Figure 7

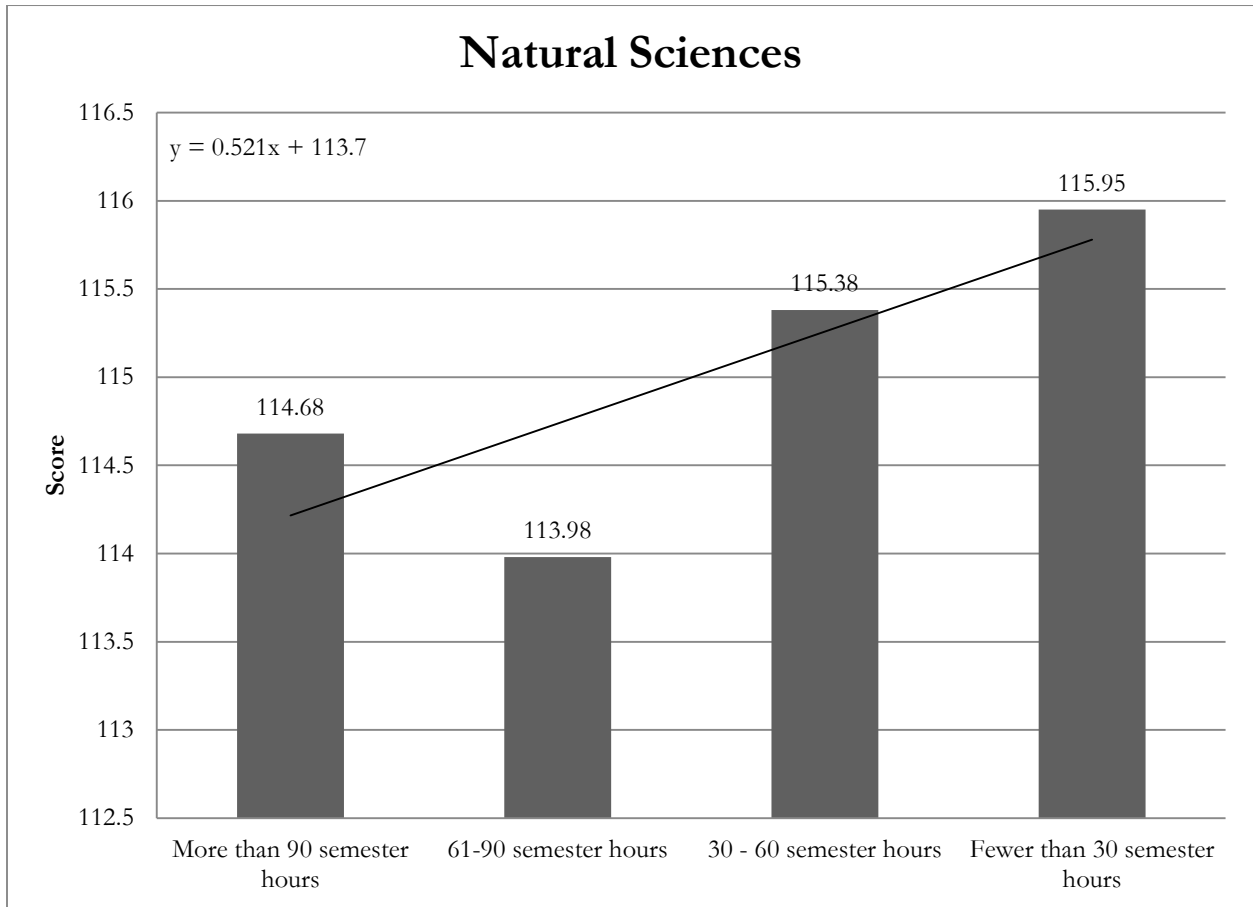


Figure 8

## Significant Findings

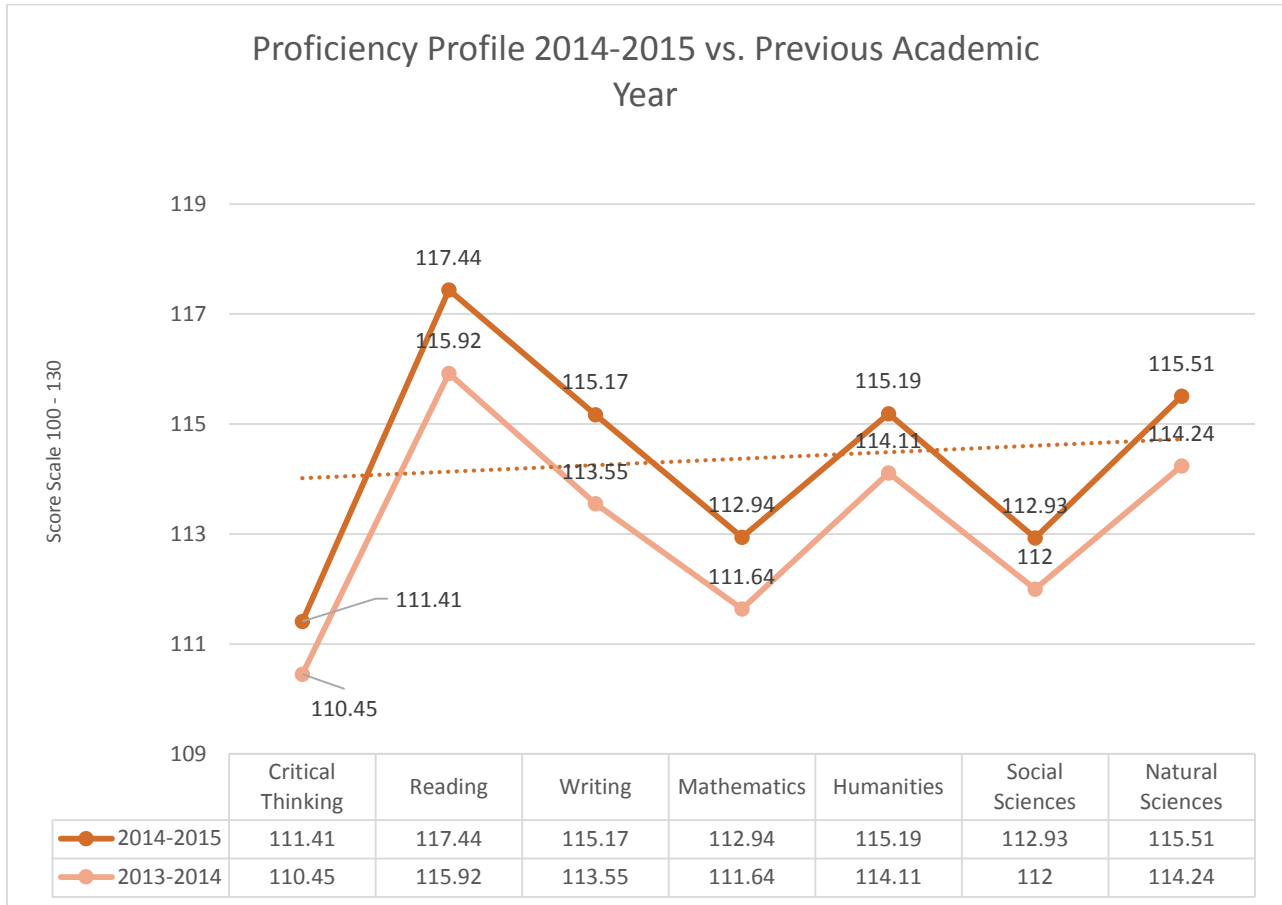


Figure 9

In figure 9, we have a line chart for comparison of the proficiency profile 2014 – 2015 academic year versus the previous academic year. The desired outcome is the darker line always on top or above the lighter line. The graph clearly shows an improvement over the previous academic year.



## Demographic Analysis

### Program Enrolled

Number of students tested: 671

Number of students included in these statistics: 650

	Number	Total Score	Critical Thinking	Reading	Writing	Mathematics	Humanities	Social Sciences	Natural Sciences
<b>Total Group</b>	650	443.94 (18.54)	111.41 (6.28)	117.44 (7.26)	115.17 (4.66)	112.94 (5.74)	115.19 (6.52)	112.93 (6.35)	115.51 (6.11)
<b>AA/AS</b>	45	440.13 (19.13)	110.56 (6.02)	117.07 (7.07)	114.16 (5.18)	111.22 (5.52)	114.91 (6.05)	111.84 (6.36)	115.04 (5.87)
<b>BA/BS</b>	441	446.90 (18.30)	112.27 (6.29)	118.41 (7.21)	115.79 (4.44)	113.73 (5.68)	116.13 (6.49)	113.73 (6.42)	116.29 (6.03)
<b>Transfer Program</b>	5	448.00 (17.05)	112.40 (5.92)	118.60 (5.78)	117.20 (2.23)	112.20 (4.83)	116.80 (6.08)	113.40 (6.97)	115.80 (4.31)
<b>Career/Vocational</b>	37	439.97 (15.30)	110.24 (5.12)	116.38 (6.53)	114.22 (4.73)	112.35 (5.96)	113.65 (5.17)	112.14 (5.32)	114.49 (5.75)
<b>Certificate</b>	9	446.56 (17.80)	114.22 (5.79)	118.89 (6.90)	114.44 (4.14)	112.56 (5.62)	116.78 (6.16)	114.89 (6.52)	118.00 (6.50)
<b>Life-Long Learning</b>	5	421.40 (14.84)	105.40 (3.14)	107.20 (5.15)	110.20 (5.31)	108.80 (6.18)	108.20 (3.71)	107.20 (3.06)	107.40 (4.50)
<b>Work Force Training</b>	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Other</b>	108	435.42 (16.53)	108.66 (5.74)	114.29 (6.55)	113.57 (4.70)	110.91 (5.24)	112.13 (6.12)	110.44 (5.49)	112.99 (5.68)

## Transfer Status

	Number	Total Score	Critical Thinking	Reading	Writing	Mathematics	Humanities	Social Sciences	Natural Sciences
<b>Total Group</b>	650	443.94 (18.54)	111.41 (6.28)	117.44 (7.26)	115.17 (4.66)	112.94 (5.74)	115.19 (6.52)	112.93 (6.35)	115.51 (6.11)
<b>Not a transfer</b>	592	443.69 (18.59)	111.35 (6.33)	117.29 (7.28)	115.08 (4.68)	112.93 (5.73)	115.08 (6.55)	112.86 (6.37)	115.41 (6.17)
<b>0 - 15 hours transferred</b>	20	450.60 (17.87)	112.65 (5.82)	120.30 (7.18)	117.00 (4.35)	114.35 (5.84)	116.60 (6.13)	114.95 (5.69)	117.70 (5.78)
<b>16 - 30 hours transferred</b>	15	446.00 (14.66)	111.60 (4.54)	119.00 (5.79)	116.00 (4.31)	113.27 (4.65)	116.67 (5.62)	113.00 (5.90)	116.33 (4.04)
<b>Over 30 hours transferred</b>	23	443.17 (18.84)	111.74 (6.13)	117.78 (6.84)	115.22 (4.04)	111.74 (6.27)	116.00 (6.29)	112.74 (6.44)	115.52 (5.52)

## Major

	Number	Total Score	Critical Thinking	Reading	Writing	Mathematics	Humanities	Social Sciences	Natural Sciences
<b>Total Group</b>	650	443.94 (18.54)	111.41 (6.28)	117.44 (7.26)	115.17 (4.66)	112.94 (5.74)	115.19 (6.52)	112.93 (6.35)	115.51 (6.11)
<b>Accounting</b>	24	438.54 (16.36)	108.71 (4.83)	115.88 (6.25)	114.21 (4.32)	112.79 (6.36)	113.13 (5.90)	111.46 (5.17)	113.29 (5.78)
<b>Chemistry</b>	8	459.88 (13.81)	116.13 (6.21)	122.50 (4.97)	118.13 (2.03)	117.75 (4.18)	120.38 (5.00)	116.63 (5.52)	120.00 (5.41)
<b>Communications</b>	16	444.06 (19.23)	111.31 (7.41)	117.00 (7.96)	115.44 (4.20)	112.94 (5.18)	114.94 (7.36)	113.31 (7.10)	114.69 (6.90)
<b>Computer &amp; Information Sciences</b>	21	449.24 (18.53)	113.29 (5.50)	119.52 (6.81)	115.90 (5.44)	114.52 (5.84)	116.00 (6.66)	114.19 (5.60)	118.62 (4.21)
<b>Criminal Justice</b>	21	436.05 (16.76)	109.33 (5.79)	114.57 (7.29)	113.38 (4.16)	110.71 (4.56)	112.71 (6.33)	111.14 (5.23)	113.24 (6.72)
<b>Earth, Atmosphere &amp; Marine Sciences</b>	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Economics</b>	7	456.86 (25.81)	117.29 (6.80)	120.57 (7.17)	115.86 (7.53)	116.57 (6.59)	119.14 (6.83)	116.57 (6.41)	120.29 (6.34)
<b>Education</b>	48	445.08 (14.36)	111.69 (5.04)	117.98 (6.06)	115.83 (3.97)	113.08 (5.06)	115.73 (5.47)	113.25 (5.58)	115.71 (4.96)
<b>Engineering &amp; Engineering Technologies</b>	4	437.50 (8.87)	107.00 (3.94)	114.50 (6.34)	112.25 (1.48)	116.50 (4.39)	114.50 (6.26)	108.25 (3.49)	110.75 (5.21)
<b>English</b>	12	448.00 (18.55)	113.58 (5.98)	120.25 (5.72)	115.92 (6.42)	112.58 (4.72)	117.58 (6.56)	114.25 (4.40)	117.50 (5.62)
<b>Environmental Sciences</b>	3	445.33 (8.18)	110.00 (4.97)	116.67 (4.78)	117.00 (3.56)	115.67 (2.36)	112.00 (4.32)	113.33 (5.25)	114.67 (3.30)

<b>Agriculture</b>	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Foreign Languages &amp; Literature</b>	2	434.00 (1.00)	106.50 (1.50)	113.50 (3.50)	115.50 (1.50)	109.50 (0.50)	115.00 (5.00)	108.00 (2.00)	108.50 (0.50)
<b>Geological Sciences</b>	1	462.00 (0.00)	116.00 (0.00)	123.00 (0.00)	116.00 (0.00)	123.00 (0.00)	115.00 (0.00)	118.00 (0.00)	123.00 (0.00)
<b>Health &amp; Medical Sciences</b>	89	446.09 (17.19)	111.99 (6.31)	118.34 (7.29)	115.78 (4.16)	113.04 (5.60)	115.84 (6.26)	113.80 (6.40)	116.11 (5.87)
<b>History</b>	5	453.00 (22.30)	115.20 (8.08)	121.40 (7.45)	115.40 (3.72)	114.00 (6.72)	116.40 (7.79)	118.00 (5.90)	119.00 (6.03)
<b>Liberal Studies</b>	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Marketing</b>	9	438.00 (20.42)	109.22 (6.25)	114.67 (8.47)	115.11 (5.04)	111.33 (5.98)	114.56 (7.73)	111.00 (6.91)	111.67 (6.27)
<b>Mathematical Sciences</b>	9	455.44 (19.26)	114.56 (6.11)	120.56 (7.78)	116.00 (3.97)	118.44 (5.29)	118.44 (6.99)	116.89 (6.49)	116.78 (5.81)
<b>Music</b>	15	445.93 (16.89)	112.07 (5.36)	118.47 (7.33)	115.13 (4.43)	114.00 (5.87)	116.20 (5.60)	113.27 (5.96)	116.27 (5.98)
<b>Philosophy</b>	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Physics &amp; Astronomy</b>	4	448.25 (14.31)	108.75 (3.49)	121.00 (8.03)	115.50 (3.35)	117.00 (5.15)	111.50 (4.82)	115.25 (3.56)	118.00 (7.84)
<b>Allied Health</b>	7	435.71 (20.82)	109.00 (5.32)	116.43 (8.19)	111.57 (4.98)	111.43 (5.45)	112.00 (5.95)	111.71 (6.02)	114.71 (7.05)
<b>Political Science</b>	6	440.00 (22.98)	111.67 (5.56)	118.67 (7.34)	112.33 (6.67)	111.67 (7.41)	118.50 (5.91)	111.67 (6.07)	115.33 (5.28)
<b>Psychology</b>	52	438.00 (20.58)	110.96 (6.43)	116.08 (7.41)	113.67 (4.99)	109.92 (6.28)	115.40 (6.32)	111.56 (6.91)	114.42 (6.13)
<b>Religion &amp; Theology</b>	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Social Work</b>	11	441.18 (16.31)	113.00 (5.86)	115.45 (7.69)	114.36 (4.14)	110.55 (3.14)	115.73 (6.11)	112.82 (6.32)	114.91 (5.32)

<b>Sociology</b>	3	425.00 (9.90)	106.00 (0.82)	111.67 (6.65)	110.00 (4.97)	108.00 (0.00)	107.67 (2.49)	108.67 (2.49)	112.67 (4.11)
<b>Undecided</b>	53	443.25 (18.50)	110.15 (6.26)	116.55 (7.51)	115.51 (4.59)	113.57 (5.83)	113.53 (6.66)	112.21 (6.61)	115.11 (6.44)
<b>Other A</b>	85	439.20 (16.01)	110.12 (6.03)	115.54 (6.56)	114.44 (4.33)	111.79 (4.64)	113.61 (6.08)	111.66 (5.87)	114.00 (5.96)
<b>Other B</b>	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Other C</b>	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Anthropology &amp; Archeology</b>	1	453.00 (0.00)	113.00 (0.00)	125.00 (0.00)	117.00 (0.00)	113.00 (0.00)	121.00 (0.00)	114.00 (0.00)	120.00 (0.00)
<b>Architecture &amp; Environmental Design</b>	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Art &amp; Art History</b>	4	442.75 (5.54)	109.75 (3.27)	115.00 (4.85)	117.25 (2.49)	114.25 (4.60)	116.25 (5.80)	106.00 (2.55)	115.00 (2.12)
<b>Banking &amp; Finance</b>	3	428.67 (21.30)	108.00 (7.26)	111.67 (7.76)	109.67 (6.85)	111.67 (3.68)	111.00 (7.26)	109.00 (3.74)	111.00 (8.60)
<b>Biological Sciences</b>	73	453.08 (18.77)	114.14 (6.50)	120.11 (7.17)	116.92 (4.26)	115.42 (5.64)	117.30 (6.80)	115.66 (6.79)	118.01 (5.68)
<b>Business Administration</b>	54	440.98 (17.00)	110.15 (5.61)	116.80 (6.60)	114.81 (4.53)	111.89 (5.34)	114.63 (6.02)	111.57 (5.58)	114.74 (5.50)

## Gender

	Number	Total Score	Critical Thinking	Reading	Writing	Mathematics	Humanities	Social Sciences	Natural Sciences
<b>Total Group</b>	650	443.94 (18.54)	111.41 (6.28)	117.44 (7.26)	115.17 (4.66)	112.94 (5.74)	115.19 (6.52)	112.93 (6.35)	115.51 (6.11)
<b>Male</b>	173	445.79 (20.92)	111.78 (6.81)	117.32 (7.76)	114.82 (5.22)	114.96 (6.21)	114.64 (7.33)	113.19 (6.62)	116.01 (6.68)
<b>Female</b>	447	443.08 (17.57)	111.23 (6.07)	117.43 (7.09)	115.26 (4.43)	112.14 (5.36)	115.34 (6.17)	112.77 (6.22)	115.30 (5.90)

## GPA

	Number	Total Score	Critical Thinking	Reading	Writing	Mathematics	Humanities	Social Sciences	Natural Sciences
<b>Total Group</b>	650	443.94 (18.54)	111.41 (6.28)	117.44 (7.26)	115.17 (4.66)	112.94 (5.74)	115.19 (6.52)	112.93 (6.35)	115.51 (6.11)
<b>None yet, entering freshman</b>	390	447.01 (17.82)	112.20 (6.32)	118.44 (6.88)	115.87 (4.42)	113.79 (5.47)	115.91 (6.35)	113.74 (6.27)	116.33 (6.10)
<b>3.50 - 4.00</b>	109	448.09 (18.32)	112.45 (6.40)	118.54 (6.82)	116.09 (4.60)	114.59 (6.08)	116.21 (6.69)	113.98 (6.23)	116.24 (5.42)
<b>3.00 - 3.49</b>	93	435.11 (16.27)	109.10 (5.54)	114.51 (7.50)	113.23 (4.56)	110.51 (4.84)	112.90 (6.46)	110.47 (5.91)	113.33 (5.80)
<b>2.50 - 2.99</b>	40	430.85 (14.67)	108.28 (4.52)	113.98 (7.25)	112.23 (3.72)	108.03 (3.80)	112.60 (5.58)	110.00 (5.55)	112.38 (5.98)
<b>2.00 - 2.49</b>	16	424.25 (14.75)	106.38 (3.66)	110.63 (7.04)	110.50 (4.44)	107.38 (4.36)	110.19 (5.13)	107.38 (4.87)	110.63 (5.15)
<b>1.00 - 1.99</b>	2	448.00 (14.00)	112.00 (2.00)	121.50 (3.50)	115.50 (3.50)	114.00 (6.00)	117.50 (3.50)	115.00 (3.00)	118.00 (2.00)
<b>Less than 1.00</b>	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

## Hours Working

	Number	Total Score	Critical Thinking	Reading	Writing	Mathematics	Humanities	Social Sciences	Natural Sciences
<b>Total Group</b>	650	443.94 (18.54)	111.41 (6.28)	117.44 (7.26)	115.17 (4.66)	112.94 (5.74)	115.19 (6.52)	112.93 (6.35)	115.51 (6.11)
<b>0</b>	309	445.02 (19.23)	111.79 (6.62)	117.65 (7.35)	115.30 (4.79)	113.34 (5.94)	115.49 (6.89)	113.21 (6.45)	115.71 (6.09)
<b>1 - 15</b>	184	442.39 (16.36)	110.63 (5.85)	116.97 (6.72)	115.22 (4.37)	112.69 (5.25)	114.60 (5.76)	112.20 (5.97)	114.94 (5.75)
<b>16 - 30</b>	94	448.20 (19.78)	112.74 (6.42)	118.37 (7.92)	115.72 (4.52)	114.30 (5.65)	116.33 (6.81)	114.17 (6.87)	116.56 (6.95)
<b>more than 30</b>	63	436.81 (16.60)	109.86 (4.76)	116.37 (7.07)	113.57 (4.67)	109.71 (5.00)	113.76 (5.89)	111.81 (5.70)	114.57 (5.56)

## Enrollment Status

	Number	Total Score	Critical Thinking	Reading	Writing	Mathematics	Humanities	Social Sciences	Natural Sciences
<b>Total Group</b>	650	443.94 (18.54)	111.41 (6.28)	117.44 (7.26)	115.17 (4.66)	112.94 (5.74)	115.19 (6.52)	112.93 (6.35)	115.51 (6.11)
<b>Full Time</b>	621	444.55 (18.34)	111.55 (6.27)	117.60 (7.20)	115.30 (4.59)	113.18 (5.67)	115.33 (6.51)	113.09 (6.28)	115.61 (6.12)
<b>Part Time</b>	29	430.79 (17.94)	108.45 (5.71)	113.90 (7.55)	112.41 (5.20)	107.83 (4.81)	112.21 (6.06)	109.48 (6.87)	113.31 (5.57)

## Ethnicity

	Number	Total Score	Critical Thinking	Reading	Writing	Mathematics	Humanities	Social Sciences	Natural Sciences
<b>Total Group</b>	650	443.94 (18.54)	111.41 (6.28)	117.44 (7.26)	115.17 (4.66)	112.94 (5.74)	115.19 (6.52)	112.93 (6.35)	115.51 (6.11)
<b>African American</b>	112	431.22 (13.94)	107.77 (4.32)	113.97 (6.78)	112.41 (4.20)	108.88 (4.34)	111.90 (5.18)	109.46 (4.96)	112.66 (5.51)
<b>Black Hispanic</b>	7	422.57 (9.44)	108.00 (2.93)	109.43 (4.62)	110.00 (3.34)	106.00 (2.98)	109.14 (4.22)	109.00 (2.56)	110.43 (4.62)
<b>Hispanic</b>	11	446.64 (23.52)	112.27 (8.40)	118.00 (7.80)	115.09 (5.00)	114.91 (6.44)	114.55 (6.56)	112.82 (7.88)	117.64 (8.04)
<b>Latino</b>	2	434.50 (18.50)	108.00 (5.00)	117.50 (7.50)	112.50 (4.50)	109.00 (4.00)	114.50 (6.50)	108.50 (5.50)	116.00 (4.00)
<b>American Indian or Alaskan Native</b>	7	443.00 (11.39)	110.71 (3.81)	117.86 (5.72)	116.29 (3.77)	112.43 (3.33)	118.43 (4.72)	110.29 (4.92)	114.14 (4.26)
<b>Other/Decline</b>	12	448.42 (22.63)	113.92 (7.69)	117.42 (7.80)	116.25 (5.80)	114.50 (6.18)	116.33 (6.85)	113.25 (7.96)	117.50 (7.30)
<b>Asian, Asian American or Pacific Islander</b>	7	442.43 (20.27)	111.71 (6.34)	115.86 (5.05)	113.00 (6.48)	115.43 (7.52)	116.14 (5.03)	112.43 (5.37)	113.57 (4.56)
<b>White</b>	492	447.04 (17.91)	112.23 (6.30)	118.35 (7.10)	115.87 (4.41)	113.87 (5.54)	115.96 (6.56)	113.83 (6.31)	116.17 (5.98)



## Credit Hours

	Number	Total Score	Critical Thinking	Reading	Writing	Mathematics	Humanities	Social Sciences	Natural Sciences
<b>Total Group</b>	650	443.94 (18.54)	111.41 (6.28)	117.44 (7.26)	115.17 (4.66)	112.94 (5.74)	115.19 (6.52)	112.93 (6.35)	115.51 (6.11)
<b>None, entering freshman</b>	445	444.67 (17.55)	111.43 (6.16)	117.56 (7.11)	115.42 (4.48)	113.32 (5.28)	115.16 (6.39)	113.02 (6.18)	115.60 (6.12)
<b>Fewer than 30 semester hours or fewer than 45 quarter hours</b>	104	445.82 (20.29)	112.11 (6.86)	117.93 (7.58)	115.35 (4.83)	113.64 (6.29)	115.62 (6.76)	113.56 (6.89)	115.95 (6.45)
<b>30 - 60 semester hours or 45 - 90 quarter hours</b>	32	440.28 (21.93)	111.03 (7.43)	117.44 (6.67)	114.22 (5.82)	110.81 (6.46)	115.72 (6.96)	112.03 (6.94)	115.38 (6.21)
<b>61 - 90 semester hours or 91 - 145 quarter hours</b>	41	436.76 (19.29)	110.12 (5.46)	115.54 (7.44)	113.61 (4.68)	109.63 (6.24)	114.56 (6.84)	111.24 (6.16)	113.98 (4.99)
<b>More than 90 semester hours or more than 145 quarter hours</b>	28	440.00 (18.28)	110.89 (5.11)	116.39 (8.14)	113.82 (4.34)	111.61 (6.55)	114.43 (6.47)	112.54 (5.92)	114.68 (5.62)

## Curriculum Completed

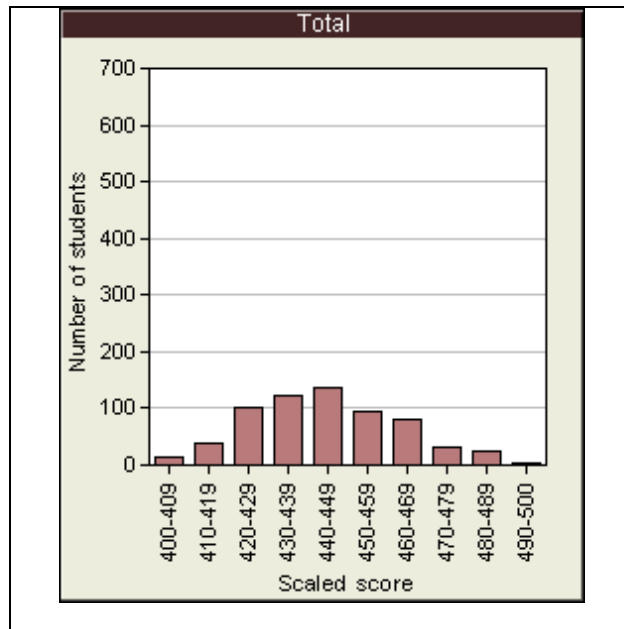
	Number	Total Score	Critical Thinking	Reading	Writing	Mathematics	Humanities	Social Sciences	Natural Sciences
<b>Total Group</b>	650	443.94 (18.54)	111.41 (6.28)	117.44 (7.26)	115.17 (4.66)	112.94 (5.74)	115.19 (6.52)	112.93 (6.35)	115.51 (6.11)
<b>None</b>	412	444.85 (17.76)	111.41 (6.16)	117.60 (7.12)	115.50 (4.46)	113.45 (5.44)	115.24 (6.35)	113.03 (6.21)	115.55 (6.16)
<b>About 25%</b>	111	444.03 (17.29)	111.75 (6.03)	117.18 (7.19)	115.18 (4.33)	113.02 (5.46)	114.86 (6.65)	113.16 (6.22)	115.70 (5.89)
<b>About 50%</b>	23	446.57 (26.18)	112.52 (8.66)	118.48 (7.89)	115.04 (6.52)	113.30 (7.58)	115.87 (7.78)	113.48 (8.23)	117.22 (6.63)
<b>About 75%</b>	59	439.22 (21.77)	110.93 (6.28)	116.39 (7.63)	114.03 (5.38)	110.56 (7.15)	115.20 (6.68)	111.63 (6.54)	114.68 (6.05)
<b>100%</b>	45	440.18 (17.72)	110.64 (6.30)	117.44 (7.63)	113.69 (4.50)	111.07 (4.63)	115.27 (6.79)	112.82 (6.39)	114.87 (5.78)

## Age

	Number	Total Score	Critical Thinking	Reading	Writing	Mathematics	Humanities	Social Sciences	Natural Sciences
<b>Total Group</b>	650	443.94 (18.54)	111.41 (6.28)	117.44 (7.26)	115.17 (4.66)	112.94 (5.74)	115.19 (6.52)	112.93 (6.35)	115.51 (6.11)
<b>&lt;20</b>	560	445.34 (18.32)	111.72 (6.37)	117.74 (7.18)	115.50 (4.59)	113.52 (5.55)	115.40 (6.53)	113.24 (6.35)	115.78 (6.16)
<b>20 - 29</b>	47	438.11 (16.86)	109.83 (5.27)	116.64 (7.26)	113.79 (4.37)	110.36 (5.70)	114.70 (6.21)	111.68 (5.67)	114.26 (5.49)
<b>30 - 39</b>	22	434.32 (20.01)	109.91 (5.62)	115.32 (7.99)	112.32 (5.49)	109.09 (5.53)	113.95 (7.04)	111.36 (6.45)	113.73 (6.14)
<b>40 - 49</b>	13	431.77 (16.80)	109.15 (5.19)	114.77 (7.45)	113.15 (3.08)	107.08 (5.81)	113.38 (5.81)	109.15 (6.75)	114.31 (4.97)
<b>50 - 59</b>	8	426.38 (8.73)	107.13 (3.02)	110.88 (4.37)	111.50 (3.71)	107.63 (1.32)	110.00 (3.74)	109.00 (4.03)	110.88 (2.76)
<b>60 - 69</b>	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>&gt;=70</b>	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

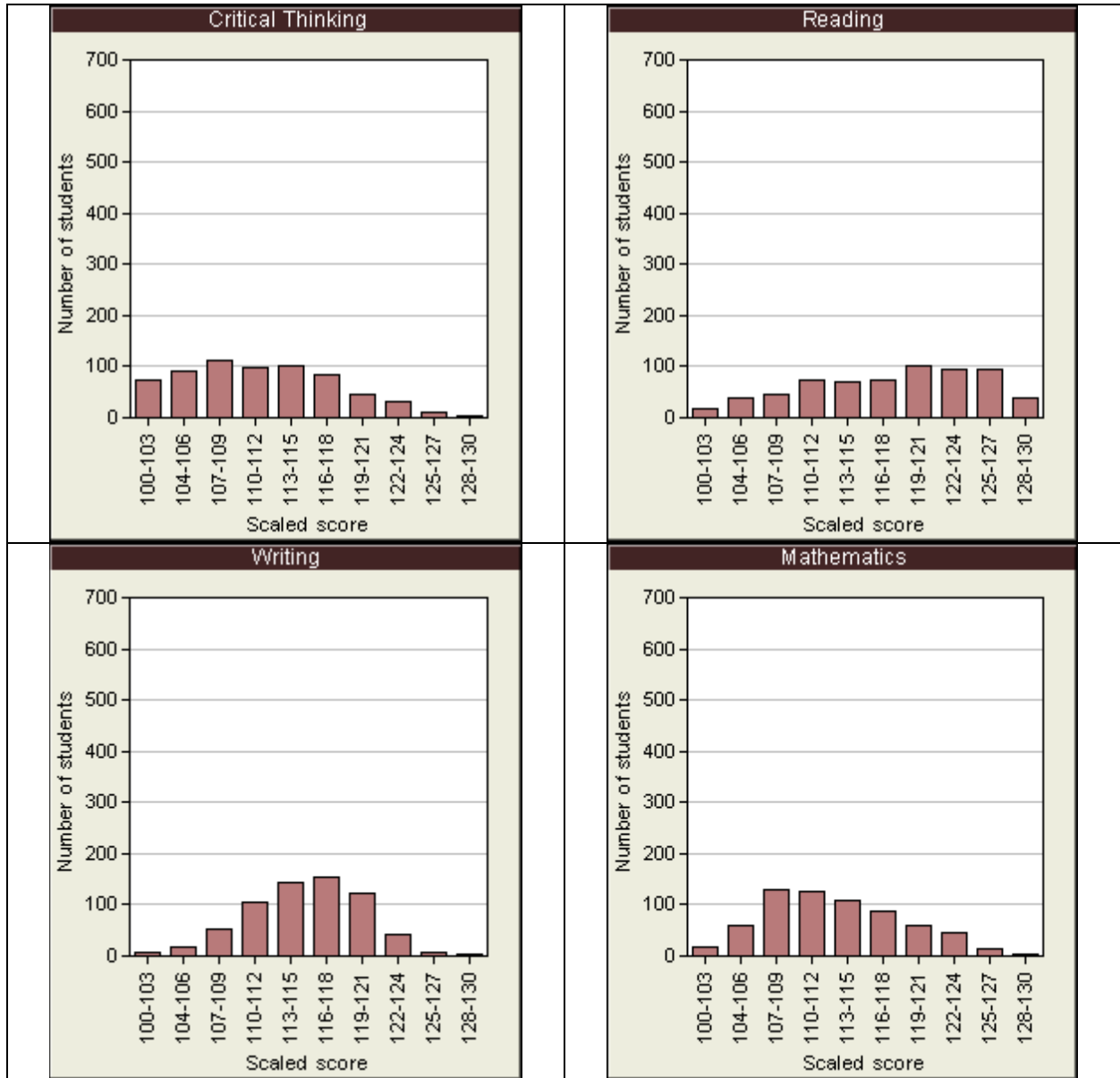
## Scaled Score Distributions

### Total



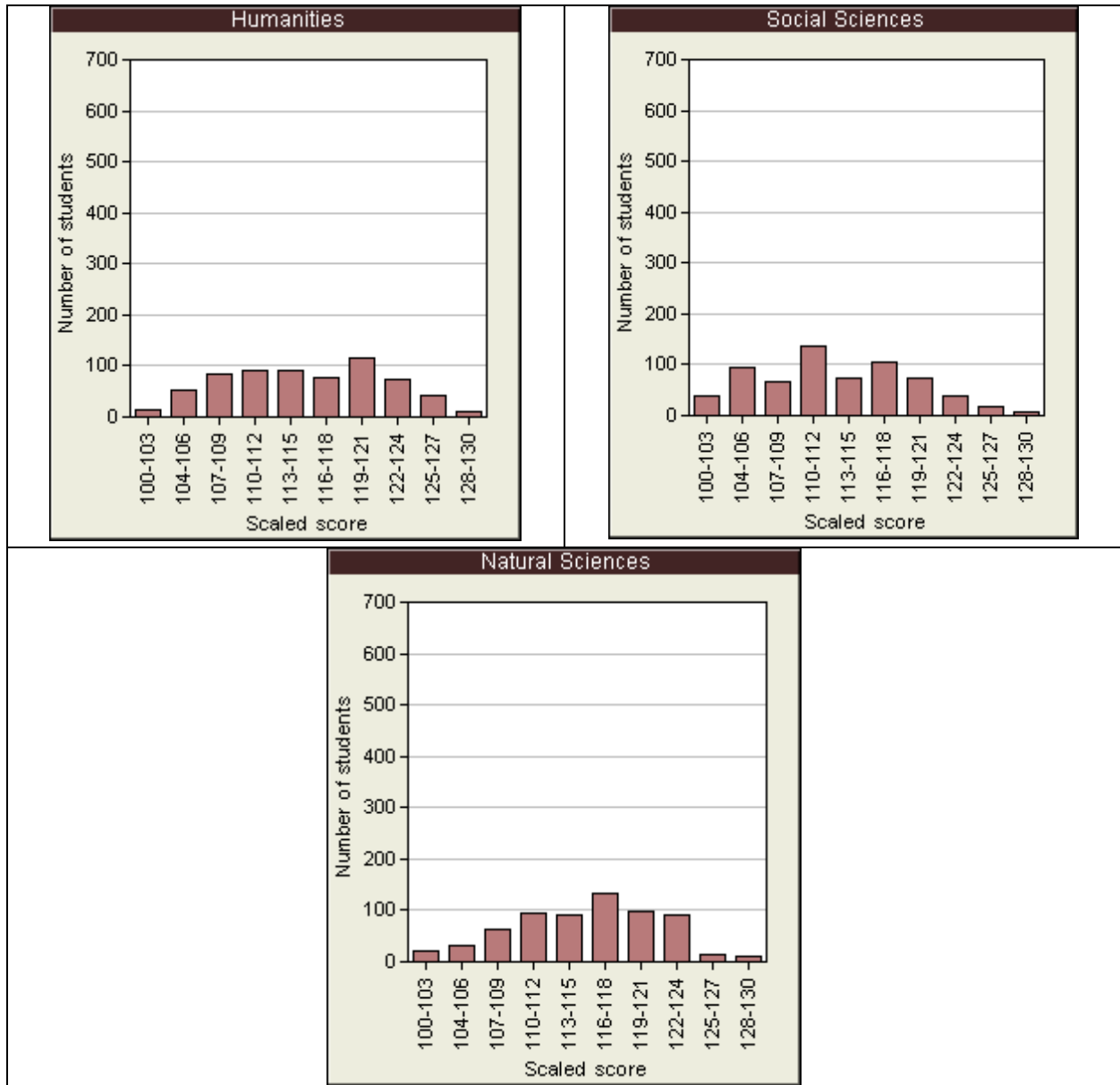
## Scaled Score Distributions

### Skills Subscores



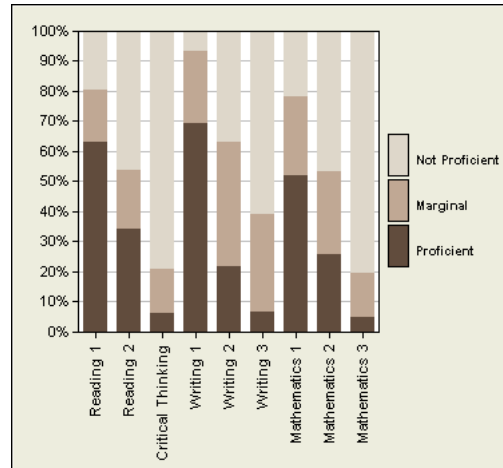
## Scaled Score Distributions

### Academic Area Subscores



## Summary of Proficiency Classifications

Skill Dimension	Proficiency Classification		
	Proficient	Marginal	Not Proficient
<b>Reading, Level 1</b>	63%	18%	19%
<b>Reading, Level 2</b>	34%	20%	46%
<b>Critical Thinking</b>	6%	15%	79%
<b>Writing, Level 1</b>	69%	24%	7%
<b>Writing, Level 2</b>	22%	41%	37%
<b>Writing, Level 3</b>	7%	32%	61%
<b>Mathematics, Level 1</b>	52%	26%	22%
<b>Mathematics, Level 2</b>	26%	28%	46%
<b>Mathematics, Level 3</b>	5%	14%	80%



## Comparative Data Analysis

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The following considerations should be kept in mind when interpreting comparative data:

- This data should be considered comparative rather than normative because the institutions included in the data do not represent proportionally the various types of higher education institutions. The data are drawn entirely from institutions that choose to use ETS Proficiency Profile. Such a self-selected sample may not be representative of all institutions.
- The number of students tested and sampling procedures vary from one institution to another. Therefore, it is impossible to verify that the students tested at each institution are representative of all that institution's students.
- The tables report data for institutions that have tested 30 or more students at the selected class level or number of credit hours attained. Institutions with fewer than 30 test takers at that class level are excluded from these calculations.

### Institution List

School Name	Number of Students
Alabama A&M University, AL	1,839
Alabama State University, AL	6,468
Athens State University, AL	3,584
Blue Mountain College, MS	397
Faulkner University, AL	523
Florida Gulf Coast University, FL	150
Florida Polytechnic University, FL	58
Florida Southern College - Lakeland, FL	68
Jacksonville State University, AL	2,276
Mississippi College, MS	1,111
Talladega College, AL	258
University of Mobile, AL	499
University of North Florida, FL	2,830
University of South Alabama, AL	212
University of West Alabama, AL	1,172
<b>Total</b>	<b>21,445</b>



## Comparative Subscores

\*Please note that all calculations refer to the eleven university's being compared unless labeled differently.

Critical Thinking	Troy University	Reading	Troy University	Writing	Troy University	Math	Troy University	Total Scores	Troy University
110.30	111.41	116.60	117.44	113.50	115.17	112.20	112.94	439.40	443.94

Humanities	Troy University	Social Sciences	Troy University	Natural Sciences	Troy University
113.70	115.19	112.40	112.93	114.20	115.51

## Troy Global (Onsite), and eTroy (Online) Distance Learning

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Troy Global (Onsite), and eTroy (Online) Distance Learning

### Descriptive Statistics

Troy Global combined with eTroy tested a sample too small to provide accurate analysis during the 2014-2015 academic year. Statistical inferences about the larger population or subgroup should not be made based on such small samples.

## Cohort Questions Specific to Troy University

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#	Question		
1	Were you dually enrolled while in high school? (Taking college classes and high school classes at same time) (532 of 567 students responded, 94%)		
		<b>Option</b>	<b>Responses</b> <b>%</b>
	a.	Yes	198            35
	b.	No	334            59
	--	no response	35             6
2	Did you complete college level Math? (517 of 567 students responded, 91%)		
		<b>Option</b>	<b>Responses</b> <b>%</b>
	a.	Yes	166            29
	b.	No	351            62
	--	no response	50             9
3	Did you complete college level English? (521 of 567 students responded, 92%)		
		<b>Option</b>	<b>Responses</b> <b>%</b>
	a.	Yes	215            38
	b.	No	306            54
	--	no response	46             8
4	Did you complete college level Biology? (514 of 567 students responded, 91%)		
		<b>Option</b>	<b>Responses</b> <b>%</b>
	a.	Yes	69             12
	b.	No	445            78
	--	no response	53             9

5	Are you a first generation college student? (524 of 567 students responded, 92%)			
		<b>Option</b>	<b>Responses</b>	<b>%</b>
	a.	Yes	142	25
	b.	No	382	67
	--	no response	43	8
6	Was Troy your first choice? (530 of 567 students responded, 93%)			
		<b>Option</b>	<b>Responses</b>	<b>%</b>
	a.	Yes	376	66
	b.	No	154	27
	--	no response	37	7
7	Did you receive the Leadership, Chancellor, or Millennium scholarship? (537 of 567 students responded, 95%)			
		<b>Option</b>	<b>Responses</b>	<b>%</b>
	a.	Yes	467	82
	b.	No	70	12
	--	no response	30	5
8	Are you conditionally admitted to TROY? (523 of 567 students responded, 92%)			
		<b>Option</b>	<b>Responses</b>	<b>%</b>
	a.	Yes	114	20
	b.	No	409	72
	--	no response	44	8

## Item Level Data

### Item Information

n = 224 for all item level data

Section	Item Number <sup>(a)</sup>	Percent Correct Institution	Percent Correct National <sup>(b)</sup>	Percent Omit	Percent Not Reached	Skill Area	Proficiency Level	Type of Content
1	1	30.5	32.4	0	0.4	Reading	II	Recognize explicit information
1	2	34.5	34.5	0	0.4	Reading	I	Meaning in context
1	3	27.0	25.6	0	0.9	Critical Thinking	III	Discern purpose of a reference
1	4	34.7	34.0	0	0.9	Critical Thinking	III	Recognize a valid inference
1	5	74.3	67.9	0	0.9	Reading	II	Discern purpose of a reference
1	6	59.5	56.4	0	0.9	Reading	I	Discern facts from a passage
1	7	91.4	85.1	0	0.9	Writing	I	Recognize agreement
1	8	91.9	74.9	0	0.9	Writing	II	Recast an existing sentence
1	9	92.8	81.4	0	0.9	Writing	II	Recast an existing sentence
1	10	81.1	66.7	0	0.9	Writing	II	Recast an existing sentence
1	11	74.8	61.6	0	0.9	Mathematics	I	Algebraic expression
1	12	45.5	42.0	0	0.9	Mathematics	II	Translation to algebraic expression
1	13	14.0	15.1	0	0.9	Mathematics	III	Percent change - ratio and proportion
1	14	74.8	71.3	0	0.9	Mathematics	I	Interpret a trend represented in a graph
1	15	58.6	55.5	0	0.9	Critical Thinking	III	Evaluate hypotheses
1	16	72.1	64.6	0	0.9	Critical Thinking	III	Evaluate hypotheses
1	17	50.5	47.5	0	0.9	Reading	I	Discern facts from a passage
1	18	73.9	63.6	0	0.9	Critical Thinking	III	Recognize an assumption

Section	Item Number <sup>(a)</sup>	Percent Correct Institution	Percent Correct National <sup>(b)</sup>	Percent Omit	Percent Not Reached	Skill Area	Proficiency Level	Type of Content
1	19	29.7	31.5	0	0.9	Critical Thinking	III	Determine relevance of information
1	20	46.8	40.5	0	0.9	Reading	II	Recognize a valid inference
1	21	45.9	44.2	0	0.9	Critical Thinking	III	Determine relevance of information
1	22	55.9	49.1	0	0.9	Reading	I	Recognize explicit information
1	23	8.6	11.8	0	0.9	Mathematics	III	Word problem - logarithmic function
1	24	87.8	77.7	0	0.9	Mathematics	I	Number line
1	25	80.6	68.3	0	0.9	Mathematics	II	Problems involving sets - properties of numbers
1	26	90.5	74.9	0	0.9	Mathematics	III	Exponential functions
1	27	46.4	42.2	0	0.9	Mathematics	II	Arithmetic word problem - units of measurement
1	28	81.5	64.7	0	0.9	Writing	III	Recognize correct construction
1	29	45.5	25.3	0	0.9	Writing	III	Recognize correct construction
1	30	92.3	88.5	0	0.9	Writing	I	Appropriate connector
1	31	37.8	42.0	0	0.9	Writing	I	Recognize incorrect adjective comparison
1	32	63.5	54.6	0	0.9	Writing	III	Recognize correct usage
1	33	55.0	51.0	0	0.9	Critical Thinking	III	Discern purpose of a reference
1	34	50.0	43.1	0	0.9	Reading	II	Discern primary purpose
1	35	55.9	47.5	0	0.9	Reading	I	Recognize explicit information
1	36	50.5	46.6	0	0.9	Critical Thinking	III	Determine relevance of information
1	37	63.5	59.5	0	0.9	Reading	I	Recognize explicit information
1	38	40.5	36.5	0	0.9	Reading	II	Recognize a valid inference
1	39	36.0	32.5	0	0.9	Critical Thinking	III	Determine relevance of information
1	40	60.4	52.6	0	0.9	Reading	II	Synthesize material

Section	Item Number <sup>(a)</sup>	Percent Correct Institution	Percent Correct National <sup>(b)</sup>	Percent Omit	Percent Not Reached	Skill Area	Proficiency Level	Type of Content
1	41	61.7	52.8	0	0.9	Critical Thinking	III	Recognize an assumption
1	42	47.3	43.4	0	0.9	Reading	II	Recognize a valid inference
1	43	50.5	40.8	0	0.9	Writing	I	Order sentences in a paragraph
1	44	48.2	37.6	0	0.9	Writing	III	Recognize inappropriate parallelism
1	45	45.9	42.3	0	0.9	Writing	III	Recognize inappropriate idiom
1	46	87.8	76.4	0	0.9	Writing	I	Recognize agreement
1	47	69.8	70.3	0	0.9	Writing	I	Recognize grammatical correction
1	48	67.4	59.0	0	1.3	Writing	III	Recognize correct construction
1	49	94.1	90.2	0	1.3	Mathematics	I	Arithmetic word problem - work units
1	50	11.3	8.0	0	1.3	Mathematics	III	Word problem - algebraic expression
1	51	78.3	67.7	0	1.3	Mathematics	II	Translation to algebraic expression
1	52	75.5	65.5	0	1.8	Mathematics	II	Arithmetic word problem - ratio and proportion
1	53	25.5	17.3	0	1.8	Mathematics	II	Number line - algebraic manipulation
1	54	73.6	66.1	0	1.8	Mathematics	III	Solve problems involving inequalities
2	1	36.4	35.3	0	1.8	Critical Thinking	III	Recognize a valid inference
2	2	50.0	46.1	0	1.8	Reading	I	Recognize explicit information
2	3	56.4	46.8	0	1.8	Reading	II	Discern primary purpose
2	4	59.1	53.5	0	1.8	Critical Thinking	III	Discern purpose of a reference
2	5	50.0	42.6	0	1.8	Reading	II	Discern primary purpose
2	6	69.5	63.5	0	1.8	Reading	I	Recognize explicit information
2	7	80.5	69.3	0	1.8	Writing	II	Recast an existing sentence

Section	Item Number <sup>(a)</sup>	Percent Correct Institution	Percent Correct National <sup>(b)</sup>	Percent Omit	Percent Not Reached	Skill Area	Proficiency Level	Type of Content
2	8	94.5	91.5	0	1.8	Writing	II	Recast an existing sentence
2	9	84.1	70.5	0	1.8	Writing	II	Recast an existing sentence
2	10	43.2	36.8	0	1.8	Critical Thinking	III	Determine relevance of information
2	11	65.5	57.7	0	1.8	Reading	I	Discern facts from a passage
2	12	32.4	30.2	0	2.2	Critical Thinking	III	Determine relevance of information
2	13	63.5	56.0	0	2.2	Critical Thinking	III	Recognize an assumption
2	14	9.1	7.1	0	2.2	Mathematics	III	Data interpretation - percent change
2	15	72.1	69.0	0	2.2	Mathematics	I	Data interpretation - find information
2	16	83.6	64.3	0	2.2	Mathematics	I	Negative and positive integers - average
2	17	74.4	67.2	0	2.2	Critical Thinking	III	Evaluate an argument
2	18	65.3	60.9	0	2.2	Critical Thinking	III	Determine relevance of information
2	19	18.7	19.0	0	2.2	Reading	I	Recognize explicit information
2	20	47.0	35.9	0	2.2	Critical Thinking	III	Determine relevance of information
2	21	49.5	49.1	0	2.7	Critical Thinking	III	Recognize an assumption
2	22	60.6	52.5	0	2.7	Reading	II	Synthesize material
2	23	18.0	19.4	0	3.1	Critical Thinking	III	Evaluate data for consistency
2	24	59.9	48.7	0	3.1	Critical Thinking	III	Extrapolate from known facts
2	25	76.5	65.5	0	3.1	Writing	I	Recognize appropriate transitions
2	26	55.3	50.4	0	3.1	Writing	III	Recognize most effective revision
2	27	64.5	66.8	0	3.1	Mathematics	III	Data interpretation - rate of change



Section	Item Number <sup>(a)</sup>	Percent Correct Institution	Percent Correct National <sup>(b)</sup>	Percent Omit	Percent Not Reached	Skill Area	Proficiency Level	Type of Content
2	28	62.7	50.5	0	3.1	Mathematics	II	Arithmetic word problem - embedded ratios
2	29	75.6	57.7	0	3.1	Mathematics	I	Arithmetic word problem
2	30	24.0	25.2	0	3.1	Mathematics	III	Rational functions/exponents/change conditions and evaluate
2	31	59.4	44.3	0	3.1	Mathematics	I	Data interpretation - read information
2	32	78.3	70.7	0	3.1	Writing	I	Recognize correct word choice
2	33	85.7	76.8	0	3.1	Writing	I	Recognize correct word choice
2	34	88.9	76.0	0	3.1	Writing	III	Appropriate use of parallelism
2	35	73.1	61.9	0	3.6	Reading	I	Discern facts from a passage
2	36	63.0	52.7	0	3.6	Reading	II	Discern purpose of a reference
2	37	35.6	30.3	0	3.6	Critical Thinking	III	Evaluate hypotheses
2	38	51.4	43.6	0	3.6	Reading	II	Evaluate rhetorical structure
2	39	44.9	41.4	0	3.6	Reading	I	Recognize explicit information
2	40	62.8	51.8	0	4.0	Reading	II	Recognize a valid inference
2	41	34.9	31.3	0	4.0	Critical Thinking	III	Extrapolate from known facts
2	42	72.6	52.8	0	4.0	Writing	II	Incorporate new material into passage
2	43	56.3	50.2	0	4.0	Writing	III	Organize text for coherence/rhetorical effect
2	44	72.0	63.9	0	4.5	Writing	II	Recast an existing sentence
2	45	65.4	60.1	0	4.5	Writing	II	Recast an existing sentence
2	46	40.2	37.7	0	4.5	Mathematics	II	Algebraic word problem - units of measurement/rate
2	47	15.0	18.6	0	4.9	Mathematics	I	Data interpretation - read information
2	48	35.2	40.6	0	4.9	Mathematics	II	Algebraic expressions - average
2	49	31.0	22.5	0	4.9	Mathematics	III	Probability

Section	Item Number <sup>(a)</sup>	Percent Correct Institution	Percent Correct National <sup>(b)</sup>	Percent Omit	Percent Not Reached	Skill Area	Proficiency Level	Type of Content
2	50	41.5	38.6	0	5.4	Critical Thinking	III	Evaluate an argument
2	51	51.4	49.4	0	5.4	Critical Thinking	III	Evaluate an argument
2	52	42.5	42.3	0	5.4	Reading	I	Recognize explicit information
2	53	49.1	42.3	0	5.4	Critical Thinking	III	Extrapolate from known facts
2	54	36.5	35.1	0	5.8	Reading	II	Discern primary purpose

Section	Item Number <sup>(a)</sup>	Percent Correct Institution	Percent Correct National <sup>(b)</sup>	Percent Omit	Percent Not Reached	Skill Area	Proficiency Level	Type of Content
1	1	36.5	37.2	0	0.4	Reading	I	Recognize explicit information
1	2	45.5	44.7	0	0.4	Critical Thinking	III	Extrapolate from known facts
1	3	43.2	43.6	0	0.4	Critical Thinking	III	Determine relevance of information
1	4	74.3	67.1	0	0.4	Reading	II	Discern purpose of a reference
1	5	57.2	55.4	0	0.4	Reading	I	Discern facts from a passage
1	6	85.6	85.4	0	0.4	Writing	I	Recognize agreement
1	7	85.6	74.9	0	0.4	Writing	II	Recast an existing sentence
1	8	87.8	74.9	0	0.4	Writing	II	Recast an existing sentence
1	9	55.0	54.5	0	0.4	Writing	II	Recast an existing sentence
1	10	68.5	61.8	0	0.4	Mathematics	I	Algebraic expression
1	11	45.9	42.2	0	0.4	Mathematics	II	Translation to algebraic expression
1	12	14.0	15.9	0	0.4	Mathematics	III	Percent change - ratio and proportion
1	13	52.7	54.5	0	0.4	Mathematics	I	Data interpretation - read information
1	14	66.2	62.5	0	0.4	Mathematics	II	Arithmetic word problem - average
1	15	59.5	55.0	0	0.4	Critical Thinking	III	Evaluate hypotheses
1	16	67.1	64.0	0	0.4	Critical Thinking	III	Evaluate hypotheses
1	17	46.8	48.5	0	0.4	Reading	I	Discern facts from a passage
1	18	65.3	63.6	0	0.4	Critical Thinking	III	Recognize an assumption
1	19	20.7	29.4	0	0.4	Critical Thinking	III	Determine relevance of information

Section	Item Number <sup>(a)</sup>	Percent Correct Institution	Percent Correct National <sup>(b)</sup>	Percent Omit	Percent Not Reached	Skill Area	Proficiency Level	Type of Content
1	20	52.7	52.1	0.4	0.4	Mathematics	III	Arithmetic word problem - percent change
1	21	19.4	20.9	0.4	0.4	Mathematics	III	Data interpretation and inference
1	22	17.6	22.7	0.4	0.4	Mathematics	II	Problems involving exponents - algebraic manipulation
1	23	74.8	71.6	0	0.4	Mathematics	I	Percent
1	24	94.6	93.3	0	0.4	Reading	I	Recognize explicit information
1	25	36.9	30.9	0	0.4	Critical Thinking	III	Extrapolate from known facts
1	26	58.8	47.4	0	0.9	Reading	II	Recognize a valid inference
1	27	38.5	43.9	0	0.9	Critical Thinking	III	Recognize an assumption
1	28	67.4	55.5	0	0.9	Writing	I	Order sentences in a paragraph
1	29	86.0	66.6	0	0.9	Writing	III	Recognize correct construction
1	30	78.3	72.0	0	0.9	Writing	I	Recognize grammatical correction
1	31	80.1	65.1	0	0.9	Writing	III	Recognize correct construction
1	32	38.0	39.4	0	0.9	Writing	III	Recognize redundancy
1	33	58.8	55.9	0	0.9	Reading	I	Recognize explicit information
1	34	57.0	54.1	0	0.9	Reading	II	Discern purpose of a reference
1	35	40.3	37.9	0	0.9	Reading	II	Discern primary purpose
1	36	56.1	56.4	0	0.9	Critical Thinking	III	Extrapolate from known facts
1	37	45.2	40.9	0	0.9	Reading	II	Discern primary purpose
1	38	42.1	35.9	0	0.9	Reading	I	Recognize explicit information

Section	Item Number <sup>(a)</sup>	Percent Correct Institution	Percent Correct National <sup>(b)</sup>	Percent Omit	Percent Not Reached	Skill Area	Proficiency Level	Type of Content
1	39	61.5	56.1	0	0.9	Reading	I	Meaning in context
1	40	43.0	37.6	0.4	0.9	Critical Thinking	III	Evaluate an argument
1	41	58.2	53.4	0	1.3	Critical Thinking	III	Recognize an assumption
1	42	50.5	45.4	0	1.3	Reading	II	Recognize a valid inference
1	43	85.5	74.0	0	1.3	Writing	III	Organize writing into larger units
1	44	64.1	56.3	0	1.3	Writing	II	Organize for coherence/rhetorical effect
1	45	66.4	56.5	0	1.3	Writing	I	Recognize incorrect word choice
1	46	75.0	67.0	0	1.3	Writing	III	Recognize correct construction
1	47	8.6	8.4	0.4	1.3	Mathematics	III	Word problem - algebraic expression
1	48	92.3	88.7	0	1.3	Mathematics	I	Arithmetic word problem - work units
1	49	75.9	67.8	0	1.3	Mathematics	II	Translation to algebraic expression
1	50	73.2	61.9	0	1.3	Mathematics	I	Data interpretation - read information
1	51	82.3	76.8	0	1.3	Mathematics	III	Data interpretation - arithmetic calculation
1	52	28.6	26.9	0	1.3	Reading	II	Recognize a valid inference
1	53	53.2	46.7	0	1.3	Reading	I	Recognize explicit information
1	54	40.5	37.4	0	1.3	Critical Thinking	III	Extrapolate from known facts
2	1	50.0	48.0	0	1.3	Critical Thinking	III	Extrapolate from known facts
2	2	59.1	46.7	0	1.3	Reading	II	Discern purpose of a reference
2	3	46.8	38.0	0	1.3	Reading	I	Recognize explicit information

Section	Item Number <sup>(a)</sup>	Percent Correct Institution	Percent Correct National <sup>(b)</sup>	Percent Omit	Percent Not Reached	Skill Area	Proficiency Level	Type of Content
2	4	44.7	42.0	0	1.8	Critical Thinking	III	Extrapolate from known facts
2	5	37.0	37.2	0	1.8	Critical Thinking	III	Determine relevance of information
2	6	58.7	56.9	0	2.2	Reading	I	Discern facts from a passage
2	7	56.9	52.8	0	2.2	Writing	II	Recast an existing sentence
2	8	83.5	71.1	0	2.2	Writing	II	Recast an existing sentence
2	9	77.1	70.5	0	2.2	Mathematics	I	Arithmetic word problem - non routine
2	10	66.1	59.0	0	2.2	Mathematics	II	Data interpretation - trends
2	11	33.9	36.2	0.4	2.2	Mathematics	II	Translation to algebraic expression
2	12	28.4	26.5	0.4	2.2	Mathematics	III	Exponents
2	13	67.9	56.2	0	2.2	Writing	III	Recognize correct construction
2	14	83.0	71.9	0	2.2	Writing	I	Recognize agreement
2	15	55.5	59.0	0	2.2	Writing	I	Organize for coherence/rhetorical effect
2	16	63.6	61.1	0	2.7	Critical Thinking	III	Recognize an assumption
2	17	44.2	42.5	0.4	3.6	Critical Thinking	III	Recognize an assumption
2	18	31.2	28.3	0	3.6	Critical Thinking	III	Determine relevance of information
2	19	54.9	46.5	0	3.6	Reading	I	Recognize explicit information
2	20	19.6	20.1	0	4.0	Reading	II	Recognize a valid inference
2	21	41.1	43.5	0	4.0	Critical Thinking	III	Extrapolate from known facts
2	22	48.1	48.2	0.4	4.0	Critical Thinking	III	Recognize an assumption

Section	Item Number <sup>(a)</sup>	Percent Correct Institution	Percent Correct National <sup>(b)</sup>	Percent Omit	Percent Not Reached	Skill Area	Proficiency Level	Type of Content
2	23	48.1	49.3	0.4	4.0	Reading	II	Synthesize material
2	24	18.7	19.3	0.4	4.0	Critical Thinking	III	Evaluate data for consistency
2	25	71.0	66.8	0	4.0	Writing	I	Recognize appropriate transitions
2	26	52.8	49.7	0	4.0	Writing	III	Recognize most effective revision
2	27	38.8	37.8	0	4.0	Writing	I	Recognize agreement among elements
2	28	58.4	47.1	0	4.0	Writing	III	Recognize correct construction
2	29	7.0	8.2	0	4.0	Writing	II	Recast an existing sentence
2	30	55.6	49.5	0	4.0	Writing	II	Recast an existing sentence
2	31	89.3	81.2	0	4.0	Writing	II	Recast an existing sentence
2	32	72.9	60.4	0	4.0	Mathematics	I	Arithmetic word problem
2	33	50.5	49.6	0.4	4.0	Mathematics	II	Arithmetic word problem - embedded ratios
2	34	70.6	65.0	0.4	4.0	Mathematics	III	Data interpretation - rate of change
2	35	65.9	59.8	0	4.0	Mathematics	I	Data interpretation - read information
2	36	28.5	25.1	1.3	4.0	Mathematics	III	Algebraic equations - average
2	37	75.7	68.3	0	4.0	Writing	I	Recognize agreement among elements
2	38	87.4	72.1	0.4	4.0	Writing	III	Recognize correct construction
2	39	49.1	45.0	0	4.0	Reading	II	Discern purpose of a reference
2	40	61.7	57.0	0	4.0	Reading	I	Discern facts from a passage
2	41	61.7	49.8	0.9	4.0	Reading	II	Recognize a valid inference

Section	Item Number <sup>(a)</sup>	Percent Correct Institution	Percent Correct National <sup>(b)</sup>	Percent Omit	Percent Not Reached	Skill Area	Proficiency Level	Type of Content
2	42	41.8	34.2	0.4	4.5	Critical Thinking	III	Determine relevance of information
2	43	45.1	44.5	0.4	4.5	Mathematics	II	Algebraic word problem - non routine
2	44	92.0	82.0	0	4.5	Mathematics	I	Data interpretation - read information
2	45	13.3	11.9	0	5.8	Mathematics	II	Algebraic equations - fractions
2	46	66.2	61.4	0.4	5.8	Mathematics	III	Properties of numbers - order
2	47	27.1	32.4	0	5.8	Reading	I	Recognize explicit information
2	48	43.3	38.8	0	5.8	Critical Thinking	III	Extrapolate from known facts
2	49	32.9	34.1	0	5.8	Critical Thinking	III	Draw valid conclusions
2	50	43.8	39.8	0	5.8	Critical Thinking	III	Determine relevance of information
2	51	53.8	53.0	0	5.8	Critical Thinking	III	Draw valid conclusions
2	52	34.8	38.0	0	5.8	Reading	I	Recognize explicit information
2	53	35.7	32.1	0	5.8	Reading	II	Recognize a valid inference
2	54	42.1	45.2	0	6.3	Critical Thinking	III	Determine relevance of information



Section	Item Number <sup>(a)</sup>	Percent Correct Institution	Percent Correct National <sup>(b)</sup>	Percent Omit	Percent Not Reached	Skill Area	Proficiency Level	Type of Content
1	1	50.0	42.5	0	0	Reading	II	Discern primary purpose
1	2	52.2	44.3	0	0	Reading	I	Recognize explicit information
1	3	27.7	22.5	0	0	Critical Thinking	III	Determine relevance of information
1	4	53.6	51.4	0	0	Reading	I	Discern facts from a passage
1	5	50.0	45.6	0	0	Reading	II	Recognize a valid inference
1	6	70.5	61.6	0	0	Reading	II	Recognize a valid inference
1	7	94.2	88.3	0	0	Writing	I	Recognize agreement
1	8	91.5	83.7	0	0	Writing	I	Recognize agreement
1	9	69.6	59.1	0	0	Writing	III	Recognize correct construction
1	10	75.9	66.0	0	0	Mathematics	I	Data interpretation - read information
1	11	71.4	51.9	0	0	Mathematics	II	Draw conclusion from algebraic equations
1	12	83.0	64.0	0	0	Mathematics	I	Apply formula
1	13	70.1	65.6	0.4	0	Mathematics	II	Algebraic word problem - system of equations
1	14	22.8	21.6	0	0	Mathematics	III	Exponential function
1	15	76.8	68.5	0	0	Reading	I	Discern facts from a passage
1	16	54.5	48.7	0.4	0	Critical Thinking	III	Evaluate data for consistency
1	17	49.1	47.3	0	0	Reading	II	Recognize a valid inference

Section	Item Number <sup>(a)</sup>	Percent Correct Institution	Percent Correct National <sup>(b)</sup>	Percent Omit	Percent Not Reached	Skill Area	Proficiency Level	Type of Content
1	18	20.1	14.4	0.4	0	Critical Thinking	III	Evaluate an argument
1	19	78.1	68.8	0	0	Critical Thinking	III	Evaluate hypotheses
1	20	68.3	59.3	0	0	Critical Thinking	III	Determine relevance of information
1	21	71.9	57.7	0	0	Critical Thinking	III	Determine relevance of information
1	22	92.4	87.9	0	0	Mathematics	I	Data interpretation - read information
1	23	36.6	25.1	0	0	Mathematics	II	Algebraic manipulation - ratio and proportion
1	24	26.8	23.8	0.4	0	Mathematics	III	Word problem - sampling
1	25	53.1	41.4	0	0	Mathematics	III	Word problem - algebraic equation
1	26	86.6	81.1	0	0	Writing	I	Recognize incorrect word choice
1	27	59.4	59.8	0	0	Writing	II	Recognize coordination
1	28	83.9	78.8	0	0	Writing	III	Recognize correct construction
1	29	27.2	22.4	0	0	Writing	III	Recognize correct construction
1	30	77.2	58.4	0	0	Writing	II	Recognize grammatical correction
1	31	84.4	68.3	0	0	Writing	II	Recognize agreement
1	32	63.8	57.3	0.4	0	Reading	II	Recognize a valid inference
1	33	37.5	31.9	0	0	Reading	I	Recognize explicit information

Section	Item Number <sup>(a)</sup>	Percent Correct Institution	Percent Correct National <sup>(b)</sup>	Percent Omit	Percent Not Reached	Skill Area	Proficiency Level	Type of Content
1	34	40.6	32.0	0	0	Critical Thinking	III	Determine relevance of information
1	35	35.7	24.8	0	0	Critical Thinking	III	Determine relevance of information
1	36	63.8	53.8	0	0	Critical Thinking	III	Determine relevance of information
1	37	82.1	76.0	0	0	Reading	II	Recognize a valid inference
1	38	86.6	74.1	0	0	Reading	I	Recognize explicit information
1	39	48.7	43.4	0	0	Critical Thinking	III	Recognize a valid inference
1	40	88.4	80.8	0	0	Reading	I	Discern facts from a passage
1	41	53.6	46.8	0	0	Critical Thinking	III	Evaluate data for consistency
1	42	63.8	54.6	0	0	Reading	II	Recognize a valid inference
1	43	49.3	38.4	0	0.4	Writing	II	Incorporate new material
1	44	69.1	62.0	0	0.4	Writing	III	Recognize most effective revision
1	45	77.6	66.3	0	0.4	Writing	II	Incorporate new material
1	46	62.8	55.7	0	0.4	Mathematics	I	Data interpretation of two related charts - read information
1	47	78.9	73.3	0	0.4	Mathematics	I	Number line
1	48	83.4	66.1	0	0.4	Mathematics	II	Algebraic word problem - translation
1	49	30.9	32.6	0	0.4	Mathematics	III	Arithmetic word problem - rates

Section	Item Number <sup>(a)</sup>	Percent Correct Institution	Percent Correct National <sup>(b)</sup>	Percent Omit	Percent Not Reached	Skill Area	Proficiency Level	Type of Content
1	50	38.1	35.0	0	0.4	Mathematics	III	Interpretation of graphs
1	51	44.8	40.5	0	0.4	Reading	II	Recognize a valid inference
1	52	28.7	27.6	0	0.4	Critical Thinking	III	Draw valid conclusions
1	53	43.9	39.6	0	0.4	Reading	I	Recognize explicit information
1	54	62.3	56.0	0	0.4	Critical Thinking	III	Draw valid conclusions
2	1	78.0	69.3	0	0.4	Reading	II	Recognize a valid inference
2	2	92.4	85.9	0	0.4	Reading	I	Determine meaning in context
2	3	57.7	43.1	0	0.9	Critical Thinking	III	Determine relevance of information
2	4	35.6	41.2	0	0.9	Critical Thinking	III	Draw valid conclusions
2	5	47.3	44.6	0	0.9	Critical Thinking	III	Evaluate interpretive claims
2	6	82.4	70.0	0	0.9	Writing	II	Incorporate new material
2	7	68.9	57.1	0	0.9	Writing	III	Recognize most effective revision
2	8	31.1	27.5	0	0.9	Writing	I	Recognize grammatical error
2	9	41.4	34.6	0	0.9	Writing	III	Recognize correct construction
2	10	77.9	69.9	0	0.9	Mathematics	I	Arithmetic word problem
2	11	62.6	56.4	0	0.9	Mathematics	II	Algebraic problem - embedded ratios
2	12	71.6	61.5	0	0.9	Mathematics	II	Data interpretation - read information

Section	Item Number <sup>(a)</sup>	Percent Correct Institution	Percent Correct National <sup>(b)</sup>	Percent Omit	Percent Not Reached	Skill Area	Proficiency Level	Type of Content
2	13	48.6	45.2	0	0.9	Mathematics	III	Arithmetic word problem - percent of a percent
2	14	59.5	53.2	0	0.9	Reading	I	Recognize explicit information
2	15	35.7	36.6	0	1.3	Critical Thinking	III	Determine relevance of information
2	16	36.7	35.0	0	1.3	Critical Thinking	III	Determine relevance of information
2	17	32.6	29.4	0	1.3	Writing	I	Order sentences in a paragraph
2	18	64.7	52.8	0	1.3	Writing	I	Order sentences in a paragraph
2	19	55.2	50.9	0.4	1.3	Reading	I	Recognize explicit information
2	20	35.3	30.0	0.4	1.3	Reading	II	Recognize a valid inference
2	21	35.3	30.2	0.4	1.3	Critical Thinking	III	Determine relevance of information
2	22	84.1	72.8	0	1.8	Writing	I	Recognize lack of agreement
2	23	79.5	68.6	0	1.8	Writing	I	Recognize grammatical error
2	24	70.3	63.1	0	2.2	Writing	II	Recognize lack of agreement
2	25	18.7	14.1	0	2.2	Writing	III	Recognize redundancy
2	26	47.0	55.0	0.4	2.2	Writing	III	Recognize correct construction
2	27	64.8	53.6	0.4	2.2	Reading	I	Discern facts from a passage
2	28	70.3	54.9	0.4	2.2	Reading	II	Recognize a valid inference

Section	Item Number <sup>(a)</sup>	Percent Correct Institution	Percent Correct National <sup>(b)</sup>	Percent Omit	Percent Not Reached	Skill Area	Proficiency Level	Type of Content
2	29	60.3	53.8	0.4	2.2	Critical Thinking	III	Determine relevance of information
2	30	56.6	47.6	0.4	2.2	Critical Thinking	III	Determine relevance of information
2	31	49.8	37.3	0.4	2.2	Critical Thinking	III	Determine relevance of information
2	32	46.3	32.4	0	2.7	Mathematics	I	Data interpretation - average
2	33	37.2	31.9	0	2.7	Mathematics	II	Arithmetic word problem - graduated rate
2	34	28.4	29.7	0	2.7	Mathematics	III	Word problem - percent of percent
2	35	41.0	39.3	0	3.1	Mathematics	I	Data interpretation - read information
2	36	12.5	13.1	0	3.6	Mathematics	II	Non-routine word problem - average
2	37	62.0	49.6	0	3.6	Writing	II	Recast existing sentence
2	38	20.9	23.9	0	4.0	Writing	II	Recast existing sentence
2	39	26.0	26.4	0	4.0	Writing	I	Recognize agreement
2	40	77.2	69.8	0	4.0	Writing	III	Recognize correct construction
2	41	63.3	45.7	0.4	4.0	Reading	I	Recognize explicit information
2	42	60.0	54.0	0.4	4.0	Critical Thinking	III	Determine relevance of evidence
2	43	47.7	39.6	0.4	4.5	Reading	I	Recognize explicit information
2	44	41.1	32.1	0.4	4.5	Reading	II	Recognize primary purpose

Section	Item Number <sup>(a)</sup>	Percent Correct Institution	Percent Correct National <sup>(b)</sup>	Percent Omit	Percent Not Reached	Skill Area	Proficiency Level	Type of Content
2	45	19.2	16.5	0.4	4.5	Critical Thinking	III	Draw valid conclusions
2	46	88.3	79.4	0	4.9	Mathematics	I	Solve algebraic equation
2	47	50.2	45.3	0	5.8	Mathematics	II	Properties of numbers and operations
2	48	33.3	25.5	0	6.2	Mathematics	III	Logical reasoning - similar triangles
2	49	16.7	16.9	0	6.2	Mathematics	III	Data interpretation - percent change
2	50	71.9	62.3	0	6.2	Reading	I	Determine meaning in context
2	51	52.9	52.6	0	6.2	Reading	II	Determine function of reference
2	52	33.3	38.4	0	6.2	Critical Thinking	III	Draw valid conclusions
2	53	60.0	41.9	0	6.2	Critical Thinking	III	Recognize flaws in argument
2	54	68.1	54.1	0	6.2	Critical Thinking	III	Determine relevance of information

## Definitions

- Mean, Arithmetic mean.
- The sum of a list of numbers, divided by the number of numbers.
- Median.
- "Middle value" of a list. The smallest number such that at least half the numbers in the list are no greater than it. If the list has an odd number of entries, the median is the middle entry in the list after sorting the list into increasing order. If the list has an even number of entries, the median is the smaller of the two

middle numbers after sorting. The median can be estimated from a histogram by finding the smallest number such that the area under the histogram to the left of that number is 50%.

- Standard Deviation (SD).
- The standard deviation of a set of numbers is the rms of the set of deviations between each element of the set and the mean of the set. See also sample standard deviation.
- Sample Sum.
- The sum of a random sample from a population. The expected value of the sample sum is the sample size times the population mean. For sampling with replacement, the SE of the sample sum is the population standard deviation, times the square-root of the sample size. For sampling without replacement, the SE of the sample sum is the finite-population correction  $((N-n)/(N-1))^{1/2}$  times the SE of the sample sum for sampling with replacement, with  $N$  the size of the population and  $n$  the size of the sample.
- **Kurtosis tells you how tall and sharp the central peak is**, relative to a standard bell curve.
- Variance, population variance
- The variance of a list is the square of the standard deviation of the list, that is, the average of the squares of the deviations of the numbers in the list from their mean. The variance of a random variable  $X$ ,  $\text{Var}(X)$ , is the expected value of the squared difference between the variable and its expected value:  $\text{Var}(X) = E((X - E(X))^2)$ . The variance of a random variable is the square of the standard error (SE) of the variable.
- **Harmonic mean** (sometimes called the **subcontrary mean**) is one of several kinds of average. Typically, it is appropriate for situations when the average of rates is desired.
- The harmonic mean  $H$  of the positive real numbers  $x_1, x_2, \dots, x_n > 0$  is defined to be
- $$H = \frac{n}{\frac{1}{x_1} + \frac{1}{x_2} + \dots + \frac{1}{x_n}} = \frac{n}{\sum_{i=1}^n \frac{1}{x_i}} = \frac{n \prod_{j=1}^n x_j}{\sum_{i=1}^n \prod_{j=1}^n x_j / x_i}$$
- Geometric Distribution.
- The geometric distribution describes the number of trials up to and including the first success, in independent trials with the same probability of success. The geometric distribution depends only on the single parameter  $p$ , the probability of success in each trial. For example, the number of times one must toss a fair coin until the first time the coin lands heads has a geometric distribution with parameter  $p = 50\%$ . The geometric distribution assigns probability  $p \times (1-p)^{k-1}$  to the event that it takes  $k$  trials to the first success. The expected value of the geometric distribution is  $1/p$ , and its SE is  $(1-p)^{1/2}/p$ .
- Geometric Mean.
- The geometric mean of  $n$  numbers  $\{x_1, x_2, x_3, \dots, x_n\}$  is the  $n$ th root of their product:
- $(x_1 \times x_2 \times x_3 \times \dots \times x_n)^{1/n}$ .



# Appendix I

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## Levels

### Reading and Critical Thinking

#### *Level 1*

To be considered proficient at Level 1, students should be able to:

- recognize factual material explicitly presented in a reading passage
- understand the meaning of particular words or phrases in the context of a reading passage

#### *Level 2*

To be considered proficient at Level 2, students should be able to:

- synthesize material from different sections of a passage
- recognize valid inferences derived from material in the passage
- identify accurate summaries of a passage or of significant sections of the passage
- understand and interpret figurative language
- discern the main idea, purpose or focus of a passage or a significant portion of the passage

#### *Level 3*

To be considered proficient at Level 3, students should be able to:

- evaluate competing causal explanations
- evaluate hypotheses for consistency with known facts
- determine the relevance of information for evaluating an argument or conclusion
- determine whether an artistic interpretation is supported by evidence contained in a work
- evaluate the appropriateness of procedures for investigating a question of causation
- evaluate data for consistency with known facts, hypotheses or methods
- recognize flaws and inconsistencies in an argument

## Writing

#### *Level 1*

To be considered proficient at Level 1, students should be able to:

- recognize agreement among basic grammatical elements (e.g., nouns, verbs, pronouns and conjunctions)
- recognize appropriate transition words

- recognize incorrect word choice
- order sentences in a paragraph
- order elements in an outline

### *Level 2*

To be considered proficient at Level 2, students should be able to:

- incorporate new material into a passage
- recognize agreement among basic grammatical elements (e.g., nouns, verbs, pronouns and conjunctions) when these elements are complicated by intervening words or phrases
- combine simple clauses into single, more complex combinations
- recast existing sentences into new syntactic combinations

### *Level 3*

To be considered proficient at Level 3, students should be able to:

- discriminate between appropriate and inappropriate use of parallelism
- discriminate between appropriate and inappropriate use of idiomatic language
- recognize redundancy
- discriminate between correct and incorrect constructions
- recognize the most effective revision of a sentence

## Mathematics

### *Level 1*

To be considered proficient at Level 1, students should be able to:

- Solve word problems that would most likely be solved by arithmetic and do not involve conversion of units or proportionality. These problems can be multistep if the steps are repeated rather than embedded.
- Solve problems involving the informal properties of numbers and operations, often involving the Number Line, including positive and negative numbers, whole numbers and fractions (including conversions of common fractions to percent, such as converting  $\frac{1}{4}$  to 25 percent).
- Solve problems requiring a general understanding of square roots and the squares of numbers.
- Solve a simple equation or substitute numbers into an algebraic expression.
- Find information from a graph. This task may involve finding a specified piece of information in a graph that also contains other information.

### *Level 2*

To be considered proficient at Level 2, students should be able to:

- Solve arithmetic problems with some complications, such as complex wording, maximizing or minimizing and embedded ratios. These problems include algebra problems that can be solved by arithmetic (the answer choices are numeric).

- Simplify algebraic expressions, perform basic translations, and draw conclusions from algebraic equations and inequalities. These tasks are more complicated than solving a simple equation, though they may be approached arithmetically by substituting numbers.
- Interpret a trend represented in a graph, or choose a graph that reflects a trend.
- Solve problems involving sets; problems have numeric answer choices.

### *Level 3*

To be considered proficient at Level 3, students should be able to:

- solve word problems that would be unlikely to be solved by arithmetic; the answer choices are either algebraic expressions or numbers that do not lend themselves to back-solving
- solve problems involving difficult arithmetic concepts, such as exponents and roots other than squares and square roots, and percent of increase or decrease
- generalize about numbers (e.g., identify the values of  $(x)$  for which an expression increases as  $(x)$  increases)
- Solve problems requiring an understanding of the properties of integers, rational numbers, etc.
- interpret a graph in which the trends are to be expressed algebraically or one of the following is involved: exponents and roots other than squares and square roots, percent of increase or decrease
- solve problems requiring insight or logical reasoning

## Appendix II (Technical Information)

Statistic	Total Score	Critical Thinking	Reading	Writing	Math
N of Cases	671	671	671	671	671
Minimum	400	100	100	100	100
Maximum	500	130	130	130	129
Range	100	30	30	30	29
Sum	297,227.00	74,594.00	78,604.00	77,081.00	75,591.00
Median	442	110	118	115	112
Arithmetic Mean	442.961	111.168	117.145	114.875	112.654
Trimmed Mean (10%, Two Sided)	442.574	110.907	117.507	115.095	112.426
Geometric Mean	442.549	110.989	116.905	114.768	112.501
Harmonic Mean	442.137	110.811	116.662	114.659	112.349
0.9% Upper Confidence Li	444.414	111.650	117.708	115.248	113.102
0.9% Lower Confidence Li	441.509	110.686	116.581	114.501	112.207
Standard Error of Arithm	0.740	0.245	0.287	0.190	0.228
Standard Deviation	19.160	6.359	7.429	4.925	5.901
Variance	367.112	40.433	55.187	24.256	34.827
Coefficient of Variation	0.043	0.057	0.063	0.043	0.052
Skewness(G1)	0.164	0.335	-0.345	-0.401	0.327
Standard Error of Skewne	0.094	0.094	0.094	0.094	0.094
Kurtosis(G2)	-0.384	-0.515	-0.844	0.305	-0.340
Standard Error of Kurtos	0.188	0.188	0.188	0.188	0.188
Shapiro-Wilk Statistic	0.993	0.978	0.964	0.982	0.982
Shapiro-Wilk p-value	0.003	0.000	0.000	0.000	0.000
Anderson-Darling Statist	1.063	3.787	6.652	3.719	4.163
Adjusted Anderson-Darlin	1.064	3.792	6.659	3.723	4.167
p-value	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

Statistic	Humanities	Social Sciences	Natural Sciences
N of Cases	671	671	671
Minimum	100	100	100
Maximum	129	130	130
Range	29	30	30
Sum	77,117.00	75,613.00	77,341.00
Median	115	112	116
Arithmetic Mean	114.928	112.687	115.262
Trimmed Mean (10%, Two Sided)	114.925	112.523	115.436
Geometric Mean	114.735	112.504	115.091
Harmonic Mean	114.542	112.323	114.919
0.9% Upper Confidence Li	115.433	113.175	115.736
0.9% Lower Confidence Li	114.424	112.199	114.789
Standard Error of Arithm	0.257	0.249	0.241
Standard Deviation	6.654	6.437	6.250
Variance	44.270	41.436	39.068
Coefficient of Variation	0.058	0.057	0.054
Skewness(G1)	-0.020	0.200	-0.196
Standard Error of Skewne	0.094	0.094	0.094
Kurtosis(G2)	-0.911	-0.684	-0.445
Standard Error of Kurtos	0.188	0.188	0.188
Shapiro-Wilk Statistic	0.978	0.978	0.984
Shapiro-Wilk p-value	0.000	0.000	0.000
Anderson-Darling Statist	4.678	4.824	3.887
Adjusted Anderson-Darlin	4.683	4.829	3.892
p-value	< 0.01	< 0.01	< 0.01

## Model of Dataset

$$a = 5.69912776316782$$

$$b = -13356.190217976$$

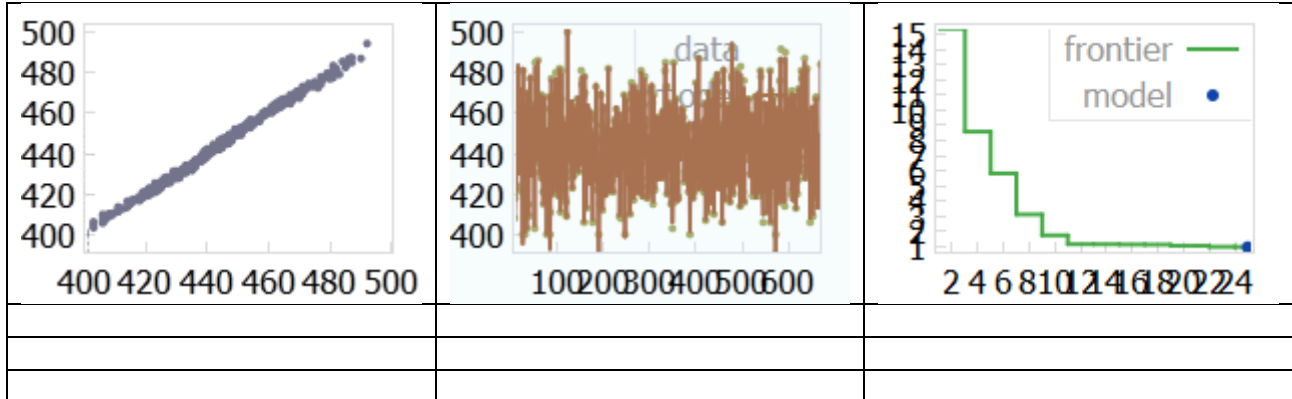
$$c = 0.00809474825389832$$

$$d = -183.838273848068$$

$$e = 121.915819507175$$

$$f = -0.0421364233634446$$

$$\text{Total scaled score} = a * \text{Reading} - \frac{b}{\text{Writing}} + c * \text{Critical} * \text{Mathematics} - d - e * \cos(-f * \text{Reading})$$



### Variable Sensitivity

Explanation of terms
<p><b>Sensitivity:</b> The relative impact within this model that a variable has on the target variable.</p> <p><b>% Positive:</b> The likelihood that increasing this variable will increase the target variable. If % positive = 70%, then 70% of the time increases in this variable lead to increases in the target variable (but the remaining 30% of the time it either decreases it or has no impact). If % positive = 0%, increases in this variable will not increase the target variable.</p>

**Positive Magnitude:** When increases in this variable lead to increases in the target variable, this is generally how big the positive impact is.

**% Negative:** The likelihood that increasing this variable will decrease the target variable. If % negative = 60%, then 60% of the time increases in this variable lead to decreases in the target variable (but the remaining 40% of the time it either increases it or has no impact). If % negative = 0%, increases in this variable will not decrease the target variable.

**Negative Magnitude:** When increases in this variable lead to decreases in the target variable, this is generally how big the negative impact is.

**Details:** Given a model equation of the form  $z = f(x,y,\dots)$ , the influence metrics of  $x$  on  $z$  are defined as follows:

**Sensitivity:**  $\frac{\left| \frac{\partial z}{\partial x} \right| \sigma(x)}{\sigma(z)}$ , evaluated at all input data points.

**% Positive:** The percent of data points where  $\frac{\partial z}{\partial x} > 0$

**% Negative:** The number of data points where  $\frac{\partial z}{\partial x} < 0$

**Positive magnitude:**  $\frac{\left| \frac{\partial z}{\partial x} \right| \sigma(x)}{\sigma(z)}$ , at all points where  $\frac{\partial z}{\partial x} > 0$

**Negative magnitude:**  $\frac{\left| \frac{\partial z}{\partial x} \right| \sigma(x)}{\sigma(z)}$ , at all points where  $\frac{\partial z}{\partial x} < 0$

where:

$\frac{\partial z}{\partial x}$  is the partial derivative of  $z$  with respect to  $x$ ,

$\sigma(x)$  is the standard deviation of  $x$  in the input data,

$\sigma(z)$  is the standard deviation of  $z$ ,

$|x|$  denotes the absolute value of  $x$  and

$\bar{x}$  denotes the mean of  $x$ .

$$y = 5.699 * \text{Reading} + -1.336e4 / \text{Writing} + 0.008095 * \text{Critical} * \text{Mathematics} - 183.8 - 121.9 * \cos(-0.04214 * \text{Reading})$$

Variable	Sensitivity	% Positive	Positive Magnitude	% Negative	Negative Magnitude
Reading	0.37286	100%	0.37286	0%	0
Critical	0.30674	100%	0.30674	0%	0
Mathematics	0.27477	100%	0.27477	0%	0
Writing	0.25193	100%	0.25193	0%	0

$$y = 5.533*Reading + 1.034*Writing + 0.008051*Critical*Mathematics - 401.1 - 117.8*cos(-0.04205*Reading)$$

Variable	Sensitivity	% Positive	Positive Magnitude	% Negative	Negative Magnitude
Reading	0.37029	100%	0.37029	0%	0
Critical	0.30536	100%	0.30536	0%	0
Mathematics	0.27354	100%	0.27354	0%	0
Writing	0.25611	100%	0.25611	0%	0

$$y = Writing + 5.548*Reading + 0.008094*Critical*Mathematics - 400.1 - 118*cos(-0.04199*Reading)$$

Variable	Sensitivity	% Positive	Positive Magnitude	% Negative	Negative Magnitude
Reading	0.3738	100%	0.3738	0%	0
Critical	0.30754	100%	0.30754	0%	0
Mathematics	0.27548	100%	0.27548	0%	0
Writing	0.24816	100%	0.24816	0%	0

$$y = 373.9 + 1.025*Writing + 0.008109*Critical*Mathematics + 0.01798*Reading^2 - 3.398*Reading$$

Variable	Sensitivity	% Positive	Positive Magnitude	% Negative	Negative Magnitude
Reading	0.32661	100%	0.32661	0%	0
Critical	0.30851	100%	0.30851	0%	0
Mathematics	0.27635	100%	0.27635	0%	0
Writing	0.25478	100%	0.25478	0%	0

$$y = 351.8 + Writing + 0.008232*Critical*Mathematics + 0.01621*Reading^2 - 2.99*Reading$$

Variable	Sensitivity	% Positive	Positive Magnitude	% Negative	Negative Magnitude
Reading	0.32407	100%	0.32407	0%	0
Critical	0.31298	100%	0.31298	0%	0
Mathematics	0.28036	100%	0.28036	0%	0
Writing	0.24833	100%	0.24833	0%	0



$$y = 231 + 1.034*Writing + 6.971e-5*Critical*Reading*Mathematics - 0.0829*Reading$$

Variable	Sensitivity	% Positive	Positive Magnitude	% Negative	Negative Magnitude
Reading	0.31567	100%	0.31567	0%	0
Critical	0.30928	100%	0.30928	0%	0
Mathematics	0.27725	100%	0.27725	0%	0
Writing	0.25517	100%	0.25517	0%	0

$$y = 234.1 + Writing + 7.005e-5*Critical*Reading*Mathematics - 0.08075*Reading$$

Variable	Sensitivity	% Positive	Positive Magnitude	% Negative	Negative Magnitude
Reading	0.31901	100%	0.31901	0%	0
Critical	0.31155	100%	0.31155	0%	0
Mathematics	0.27928	100%	0.27928	0%	0
Writing	0.24747	100%	0.24747	0%	0

$$y = 226.1 + 1.024*Writing + 6.721e-5*Critical*Reading*Mathematics$$

Variable	Sensitivity	% Positive	Positive Magnitude	% Negative	Negative Magnitude
Reading	0.3366	100%	0.3366	0%	0
Critical	0.29852	100%	0.29852	0%	0
Mathematics	0.26761	100%	0.26761	0%	0
Writing	0.25297	100%	0.25297	0%	0

$$y = 228.2 + Writing + 6.766e-5*Critical*Reading*Mathematics$$

Variable	Sensitivity	% Positive	Positive Magnitude	% Negative	Negative Magnitude
Reading	0.33878	100%	0.33878	0%	0
Critical	0.30046	100%	0.30046	0%	0
Mathematics	0.26934	100%	0.26934	0%	0
Writing	0.24711	100%	0.24711	0%	0

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