Definition of Mathematics/Quantitative Reasoning Competency:
The University of Virginia expects graduates of its College of Arts and Sciences and its Schools of Architecture,
Commerce, and Education to have and to understand basic knowledge and skills about mathematics and/or
quantitative literacy in order to use it effectively and productively for their own purposes. Specifically, we expect
these graduates to be able to apply simple mathematical methods to the solution of real-world problems. We believe
a quantitatively literate graduate should be able to:

1. Interpret mathematical models such as formulas, graphs, tables, and schematics, and draw inferences from
   them.
2. Represent mathematical information symbolically, visually, numerically, and verbally.
3. Use arithmetical, algebraic, geometric, and statistical methods to solve problems.
4. Estimate and check answers to mathematical problems in order to determine reasonableness, identify
   alternatives, and select optimal results.
5. Recognize that mathematical and statistical methods have limits.¹

Description of Methodology Used to Gather Evidence of Mathematics/Quantitative
Reasoning Competency
In spring 2004, the University administered the “Collegiate Assessment of Academic Proficiency” (CAAP) test in
Mathematics/Quantitative reasoning to a random sample of not less than 5 percent of fourth-year undergraduates
enrolled in the schools listed above. We believe the American College Testing Service’s (ACT) CAAP test for
Mathematics/Quantitative reasoning measures the elements in the Mathematics/Quantitative reasoning competency
definition given above, and that, therefore, the CAAP test provides a good reading on the extent to which UVa
undergraduates are achieving the goals listed. Moreover, results of this test provide information on the competency
levels of UVa students in comparison with students at other institutions using the same test.

The results below show the mean test score as well as the percentile ranking of UVa students compared to all other
students in the United States who took the same test. The test is scored on a scale of 40 to 80.

<table>
<thead>
<tr>
<th>Results for spring 2004 assessment of Mathematics/Quantitative Reasoning Competency</th>
<th>College of Arts and Sciences Math Majors Only</th>
<th>College of Arts &amp; Sciences All students except Math Majors</th>
<th>School of Architecture All Undergraduate Majors</th>
<th>School of Commerce All Undergraduate Concentrations</th>
<th>School of Education All Undergraduate majors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Test Score</td>
<td>68</td>
<td>61</td>
<td>60</td>
<td>61</td>
<td>61</td>
</tr>
<tr>
<td>Percentile Ranking</td>
<td>99</td>
<td>84</td>
<td>76</td>
<td>84</td>
<td>84</td>
</tr>
</tbody>
</table>

Summary:
The percentile rankings listed above show how well UVa students did in comparison with students at other
institutions which gave the CAAP test within the last three years. As expected, mathematics majors performed
exceedingly well, in the 99th percentile. The College of Arts and Sciences and Schools of Commerce and Education
all had the same mean score, which corresponds to the 84th percentile. The School of Architecture was a bit lower,
scoring in the 76th percentile.