Texas A&M University Core Curriculum
Empirical & Quantitative Skills Computational Rubric

Definition

The Texas Higher Education Coordinating Board states that the Texas Core Curriculum objective of Empirical & Quantitative Skills is "to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions."¹ Further, the American Association of Colleges & Universities (AAC&U) notes: "Individuals with strong QL [quantitative literacy] skills possess the ability to reason and solve quantitative problems from a wide array of authentic contexts and everyday life situations. They understand and can create sophisticated arguments supported by quantitative evidence and they can clearly communicate those arguments in a variety of formats (using words, tables, graphs, mathematical equations, etc., as appropriate)."²

Framing Language

This rubric is designed to be applied to student-produced work (artifacts), from a range of disciplines and a variety of genres. Ideally, the artifact assessed with this rubric will be produced by an individual student; however, this rubric may also be applied to group projects. The application of this rubric requires students to document their calculations as opposed to, for example, only selecting a multiple-choice answer.


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<table>
<thead>
<tr>
<th></th>
<th>Advanced</th>
<th>7</th>
<th>Competent</th>
<th>6</th>
<th>Developing</th>
<th>4</th>
<th>Beginner</th>
<th>2</th>
<th>Not Present</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Set Up</strong></td>
<td>Efficiently represents problem in its entirety.</td>
<td>Represented problem adequately but not in the most efficient or complete way.</td>
<td>Represented with some relationship to the problem.</td>
<td>Represented with little to no relationship to the problem.</td>
<td>No set up provided.</td>
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<tr>
<td><strong>Computation</strong></td>
<td>Calculations include no errors.</td>
<td>Calculations include few errors.</td>
<td>Calculations include some errors.</td>
<td>Calculations are inaccurate or inappropriate.</td>
<td>No calculation provided.</td>
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<tr>
<td><strong>Interpretation</strong></td>
<td>Results are competently and thoroughly interpreted with no errors.</td>
<td>Results are competently interpreted but with minor omissions or inaccuracies.</td>
<td>Results are partially or incorrectly represented.</td>
<td>Results are not interpreted in the context of the problem.</td>
<td>No results provided.</td>
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</tbody>
</table>

Adapted from the TAMU-developed Mathematics Empirical & Quantitative Skills Rubric (2014).