

**Quantitative Literacy (QL)** – also known as Numeracy or Quantitative Reasoning (QR) – is a "habit of mind," competency, and comfort in working with numerical data. Individuals with strong QL 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).

		<b>INDICATORS (observable characteristics describing levels of performance)</b>				
		<b>Needs Improvement (1)</b>	<b>(2)</b>	<b>Meets (3)</b>	<b>(4)</b>	<b>Exceeds (5)</b>
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A) Students will explain information presented in mathematical forms (e.g., equations, graphs, diagrams, tables, words).		Attempts to explain information presented in mathematical forms, but draws incorrect conclusions about what the information means.		Provides somewhat accurate explanations of information presented in mathematical forms, but occasionally makes minor errors related to computations or units.		Provides accurate explanations of information presented in mathematical forms.
B) Students will convert relevant information into various mathematical forms (e.g., equations, graphs, diagrams, tables, words).		Completes conversion of information but resulting mathematical portrayal is inappropriate or inaccurate.		Completes conversion of information but resulting mathematical portrayal is only partially appropriate or accurate.		Competently converts relevant information into an appropriate mathematical portrayal.
C) Students will perform mathematical calculations.		Competently converts relevant information into an appropriate mathematical portrayal. Calculations are attempted but are both unsuccessful and are not comprehensive.		Calculations attempted are either unsuccessful or represent only a portion of the calculations required to comprehensively solve the problem.		Calculations attempted are essentially all successful and sufficiently comprehensive to solve the problem.
D) Students will make judgments and draw appropriate conclusions based on the quantitative analysis of data, while recognizing the limits of this analysis.		Uses the quantitative analysis of data as the basis for tentative, basic judgments, although is hesitant or uncertain about drawing conclusions from this work.		Uses the quantitative analysis of data as the basis for adequate judgments, drawing plausible conclusions from this work.		Uses the quantitative analysis of data as the basis for comprehensive judgments, drawing reasonable and appropriately qualified conclusions from this work.
E) Students will make and evaluate important assumptions in estimation, modeling, and data analysis.		Attempts to describe assumptions.		Explicitly describes assumptions.		Explicitly describes assumptions and provides compelling rationale for why assumptions are appropriate.
F) Students will express quantitative evidence in support of the argument or purpose of the work (in terms of what evidence is used and how it is formatted, presented, and contextualized).		Uses quantitative information to present an argument but the information is either vague or not pertinent.		Uses pertinent quantitative information, but does not effectively connect it to the argument or purpose of the work.		Uses pertinent quantitative information and connects it to the argument or purpose of the work.