

Rubric Dimensions	Capstone	Milestones	Milestones	Benchmark	No Evidence	Not Applicable
	4	3	2	1	0	NA
B1.1: Reasonableness of Solution Demonstrate number sense. Estimate and check answers to mathematical problems in order to determine reasonableness, identify alternatives, and select optimal results. Make appropriate use of technology, being mindful of its limitations when solving problems.	Demonstrates a thorough ability to use number sense to arrive at reasonable solutions that consider all of the contextual factors of the problem and the limitations inherent in using technology as a tool for solving problems.	Demonstrates the ability to use number sense to arrive at reasonable solutions that consider most of the contextual factors of the problem and the limitations inherent in using technology as a tool for solving problems.	Demonstrates a partial ability to use number sense to arrive at reasonable solutions. Little consideration is given to the contextual factors of the problem or the limitations inherent in using technology as a tool for solving problems.	Demonstrates a limited ability to use number sense to arrive at any reasonable solutions. Little to no consideration is given to the contextual factors of the problem or the limitations inherent in using technology as a tool for solving problems.	No Evidence	Not Applicable
B1.2: Mathematical Models Recognize the behavior of polynomial, rational, radical, exponential, and logarithmic models. Represent the quantitative phenomena in these models using verbal, graphical, tabular and symbolic form.	Skillfully represents the quantitative phenomena in polynomial, rational, radical, exponential, and logarithmic models in verbal, graphical, tabular, and symbolic form, using their recognizable behaviors.	Competently represents most of the quantitative phenomena in polynomial, rational, radical, exponential, and logarithmic models in verbal, graphical, tabular, or symbolic form, using their recognizable behaviors.	Struggles to represent most of the quantitative phenomena in polynomial, rational, radical, exponential, and logarithmic models in verbal, graphical, tabular, or symbolic form, using their recognizable behaviors.	Struggles to represent any of the quantitative phenomena in polynomial, rational, radical, exponential, and logarithmic models in verbal, graphical, tabular, or symbolic form, using their recognizable behaviors.	No Evidence	Not Applicable
B1.3: Problem Solving Solve problems using mathematical (arithmetical, algebraic, geometric, and statistical) methods.	Elegantly presents a comprehensive solution to a quantitative problem using arithmetical, algebraic, geometric, and/or statistical mathematical methods.	Competently presents a solution to a quantitative problem using arithmetical, algebraic, geometric, and/or statistical mathematical methods.	Struggles to present a comprehensive solution to a quantitative problem using arithmetical, algebraic, geometric, and/or statistical mathematical methods.	Struggles to present a complete solution to a quantitative problem using arithmetical, algebraic, geometric, and/or statistical mathematical methods.	No Evidence	Not Applicable
B1.4: Units of Measure Correctly convert, interpret, and analyze different units of measure.	Skillfully converts, interprets, and analyzes all units of measure relevant to the contextual factors of the problem.	Competently converts, interprets, and analyzes units of measure relevant to the contextual factors of the problem.	Struggles to convert, interpret, and/or analyze some units of measure relevant to the contextual factors of the problem.	Struggles to convert, interpret, and/or analyze most units of measure relevant to the contextual factors of the problem.	No Evidence	Not Applicable
B1.5: Application of Mathematical Models Use mathematical models to interpret, hypothesize, and communicate about quantitative phenomena, such as the behavior of drugs in the blood, changes in populations, and fluctuations in prices.	Skillfully uses mathematical models to interpret, hypothesize, and effectively communicate about quantitative phenomena.	Competently uses mathematical models to interpret, hypothesize, and communicate about quantitative phenomena.	Shows some difficulty when attempting to use mathematical models to interpret, hypothesize, and/or communicate about quantitative phenomena.	Shows great difficulty when attempting to use mathematical models to interpret, hypothesize, and/or communicate about quantitative phenomena.	No Evidence	Not Applicable

This rubric was developed by Core Curriculum Assessment Committee using the MFA core curriculum outcomes for this knowledge area. It is based on the [AAC&U VALUE Rubrics](#). Please note that a zero is recommended by the AAC&U but does not appear on their rubrics. NA has been added to accommodate assignments that do not address a particular rubric dimension. Revised 12/8/2020.