

Maine Curriculum Matrix for Mathematics

Maine Mathematics Content Standards/Performance Indicators/ Grade Level Expectations Secondary	National Essential Skills Study (NESS) Rankings		MHSA	NESS	Priority
	Rank	Essential Skill			
Standard A. Numbers and Number Sense: Students will understand and demonstrate a sense of what numbers mean and how they are used. Students will be able to:					
1. Describe the structure of the real number system and identify its appropriate applications and limitations.	M35	Use the properties of real (rational and irrational) numbers and demonstrate understanding of ordering and absolute value.	H	M	H
2. Explain what complex numbers (real and imaginary) mean and describe some of their many uses.	M25	Perform operations and solve equations containing complex numbers.	H	M	H
Standard B. Computation: Students will understand and demonstrate computation skills. Students will be able to:					
1. Use various techniques to approximate solutions, determine the reasonableness of answers, and justify the results.	M6	Demonstrate understanding of, and accurately apply, place value to round off numbers.	H	H	H
	M10	Understand and apply a systematic methodology or procedure (e.g., direct or indirect measurement, direct or indirect proof, inductive or deductive reasoning) to model and solve problems.			
	M39	Apply techniques to obtain a rational approximation or estimate of a quantity or number (including irrational numbers such as radicals).			
2. Explain operations with number systems other than base ten.	M1	Perform operations fluently with positive and negative numbers, including decimals, ratios, percents, and fractions, and show reasoning to justify results.	H	H	H
Standard C. Data Analysis and Statistics: Students will understand and apply concepts of data analysis. Students will be able to:					
1. Determine and evaluate the effect of variables on the results of data collection.	M21	Evaluate and employ accurate and appropriate procedures for statistical data collection, organization, analysis, and display including making estimates and predictions, critiquing data, and drawing inferences (e.g., using the normal curve and z-scores, line of best fit).	M	M	M

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2. Predict and draw conclusions from charts, tables, and graphs that summarize data from practical situations.	M21	Evaluate and employ accurate and appropriate procedures for statistical data collection, organization, analysis, and display including making estimates and predictions, critiquing data, and drawing inferences (e.g., using the normal curve and z-scores, line of best fit).	M	M	M
3. Demonstrate an understanding of concepts of standard deviation and correlation and how they relate to data analysis.	M22	Interpret data to determine correlation and distinguish between correlation and cause and effect.	M	M	M
	M31	Understand and apply measures of dispersion (range, mean deviation, variance, and standard deviation).			
4. Demonstrate an understanding of the idea of random sampling and recognition of its role in statistical claims and designs for data collection.	M17	Understand the importance of random sampling and sample size in generating representative data.	M	M	M
	M21	Evaluate and employ accurate and appropriate procedures for statistical data collection, organization, analysis, and display including making estimates and predictions, critiquing data, and drawing inferences (e.g., using the normal curve and z-scores, line of best fit).			
5. Revise studies to improve their validity (e.g., in terms of better sampling, better controls, or better data analysis techniques).	M17	Understand the importance of random sampling and sample size in generating representative data.	M	M	M
	M21	Evaluate and employ accurate and appropriate procedures for statistical data collection, organization, analysis, and display including making estimates and predictions, critiquing data, and drawing inferences (e.g., using the normal curve and z-scores, line of best fit).			
	M22	Interpret data to determine correlation and distinguish between correlation and cause and effect.			