

New Mexico Career and Technical Education Curriculum Matrix for Mathematics

New Mexico Mathematics Strands/Content Standards/Benchmarks/ Performance Standards Grades 9-12	Curriculum Survey of Essential Skills National Rank	State CRT		Agriculture & Natural Resources				Architecture & Construction			Arts, AV Tech & Communications		
		9 th Grade	11 th Grade	Ag Production	Ag Services (Ag Business)	Ag Mechanics	Natural Resources	Architecture	Surveying & Drafting	Construction	Visual Arts & Design	Performing Arts	Communications
Strand: Algebra, Functions, and Graphs													
Standard: Students will understand algebraic concepts and applications.													
9-12 Benchmark: Represent and analyze mathematical situations and structures using algebraic symbols.													
1. Classify numbers and members of the following sets: <ul style="list-style-type: none"> • natural • whole • integers • rationals • irrationals 	m19	H	H	H	H	H	H	H	H	H	H	H	H
2. Simplify numerical expressions using the order of operations, including exponents.	m8 m11 m24	H	H	H	H	H	H	H	H	H	H	H	H
3. Evaluate the numerical value of expressions of one or more variables that are: <ul style="list-style-type: none"> • polynomial • rational • radical 	m7 m37 m41 m44 m46	H	H	H	H	H	H	H	H	H	H	H	H
4. Simplify algebraic monomial expressions raised to a power (e.g., $[5xy^{2}]^3$ and algebraic binomial (e.g., $[5x^2+y]^2$) expression raised to a power.	m11 m22 m24	H	H	H	H	H	H	H	H	H	H	H	H

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5. Compare and order polynomial expressions by degree.	m22 m24	L	L	M	M	M	M	H	H	M	M	L	M
6. Represent and analyze relationships using written and verbal expressions, tables, equations, and graphs, and describe the connections among those representations: <ul style="list-style-type: none"> translate from verbal expression to algebraic formulae (e.g., “Set up the equations that represent the data in the following equation: John’s father is 23 years older than John. John is 4 years older than his sister Jane. John’s mother is 3 years younger than John’s father. John’s mother is 9 times as old as Jane. How old are John, Jane, John’s mother, and John’s father?”) given data in a table, construct a function that represents these data (linear only) given a graph, construct a function that represents the graph (linear only) 	m5 m7 m34 m45 m64	H	H	H	H	H	H	H	H	H	H	H	H
7. Know, explain, and use equivalent representations for the same real number including: <ul style="list-style-type: none"> integers decimals percents ratios scientific notation numbers with integer exponents inverses (reciprocal) prime factoring 	m1 m19 m22 m24	H	H	H	H	H	H	H	H	H	H	H	H
8. Simplify algebraic expressions using the distributive property.	m3	H	H	H	H	H	H	H	H	H	H	H	H