Topics chosen on the adaptive tests for three levels of developmental mathematics based on the shared learning outcomes.

TOPICS	AR	EA	IA
Multiplying Whole Numbers	Α		
Dividing Whole Numbers	Α		
Mixed Numbers	Α		
Writing a Fraction in Lowest Terms	Α		
Dividing Fractions	Α		
Adding and Subtracting Like Fractions	Α		
Adding and Subtracting Unlike Fractions	Α		
Reading and Writing Decimals	Α		
Writing Fractions and Decimals	Α		
Basics of Percent	Α		
Exponents, Order of Operations, and Inequality		Ε	
Variables, Expressions, and Equations		Ε	
Real Numbers and the Number Line		Ε	
Adding Real Numbers		Ε	
Subtracting Real Numbers		Ε	
Multiplying and Dividing Real Numbers		Ε	
Properties of Real Numbers		Ε	
Simplifying Expressions		Ε	
The Addition Property of Equality		Ε	
The Multiplication Property of Equality		Е	
More on Solving Linear Equations		Ε	
Solving Linear Inequalities		Ε	
Compound Inequalities		Ε	
Reading Graphs: Linear Equations in Two Variables		Ε	
Graphing Linear Equations in Two Variables		Ε	
Slope of a Line		Е	
Adding and Subtracting Polynomials		Ε	
Solving Systems of Linear Equations by Elimination		Ε	

TOPICS	AR	EA	IA
Absolute Value Equations			1
Equations of Lines			1
Graphing Linear Inequalities in Two Variables			1
Introduction to Functions			1
The Product Rule and Power Rules for Exponents			1
Multiplying Polynomials			1
Special Products			1
Integer Exponents and the Quotient Rule			1
Dividing a Polynomial by a Monomial			1
Factors: The Greatest Common Factor			1
Factoring Trinomials			1
Factoring Trinomials by Grouping			1
Solving Quadratic Equations by Factoring			1
Multiplying and Dividing Rational Expressions			1
Least Common Denominator			1
Adding and Subtracting Rational Expressions			1
Complex Fractions			1
Solving Equations with Rational Expressions			1
Multiplying, Dividing, and Simplifying Radicals			1
Adding and Subtracting Radicals			1
Rationalizing the Denominator			1
Solving Equations with Radicals			1

Tammy Fitting 218.477.4018

fittingta@mnstate.edu

Minnesota State University of Moorhead

http://web.mnstate.edu/fitting/

## Key differences: Fixed vs. Adaptive Testing

Topic/feature	Fixed	Adaptive
Test design	<ul> <li>Can link tests for assessment</li> <li>Fixed number of questions</li> <li>All students complete same type of problems</li> </ul>	<ul> <li>6-10 problems per course tested</li> <li>Can link tests for assessment</li> <li>Students complete varying amounts of problems and content.</li> </ul>
Study Plan	<ul> <li>Like in MML, you can choose coverage and remove objectives.</li> <li>You can set mastery levels for practice.</li> <li>Because the test is fixed, you know which objectives are measured on tests and which are not.</li> <li>All items on the assessment are known and all iterations of the assessment include the same item types as specifically selected so the study plan is directly correlated to all of the items on the assessment. This makes this a better diagnostic tool than the adaptive test.</li> </ul>	<ul> <li>Can select topics but because the adaptive engine chooses questions, you do not know the specific objectives chosen or covered in a given test. There are only 6-10 per "level" or "course" based on Study Plan coverage.</li> <li>Study plan provides a remediation recommendation based on the actual items (within the course areas selected) included on a particular student's adaptive test. A higherachieving student continuing to answer questions correctly will continue to receive higher degree of difficulty items within the content area and items from the next higher content area, medium degree initially then higher degree if they continue successfully. This student's study plan will reflect fewer Mastery Points earned because they would have had fewer items overall on their assessment.</li> </ul>
Review	Results and problems may be reviewed by student and instructor if allowed.	Results and problems may be reviewed by student and instructor if allowed.
Placement	Can be linked to SIS (placement results delivered from MMT) through MyLabsPlus	Requires export to database and programming of placement.

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