Constructs Organized into Bins

Affect Bin	Behavior Bin	Classroom & Instruction Bin
Academic Efficacy Attitude toward MATLAB Attitudes about statistics Attitudes about statistics and statistics teaching Attitudes about statistics teaching & learning Attitudes about use of statistics, statistics teaching, and statistics in research Attitudes and Anxiety About Mathematics Technology Attitudes Toward / Beliefs About Mathematics Attitudes Toward the Value of Mathematics in Prospective Careers Attitudes Towards Group Work in Mathematics Classes Attitudes, Beliefs, and Motivation Attitudes, Beliefs, and Self-Efficacy in Mathematics Attitudes, Beliefs, Perceptions, Values Beliefs About Proofs Beliefs about statistics Beliefs about statistics teaching & learning Beliefs About the Importance of Mathematics Beliefs and Practices for Teaching Abstract Algebra Big Five Personality Factors (extraversion; neuroticism; openness; agreeableness; conscientiousness) Computer Attitude Scale Computer Confidence, Mathematics Confidence, Attitude Towards Use of Technology in Learning Mathematics Confidence and Attitudes Related to STEM Coursework Confidence in Performing Operations with Exponential and Logarithmic Expressions Confidence in Performing Operations with Rational Expressions Confidence to learn and do statistics Data Science Attitudes Efficacy and related constructs Emotional Self-Efficacy and Emotional Intelligence Emotions/Feelings Enjoyment of Mathematics Lessons Epistemic Curiosity Experience with MATLAB Interest in Class Interests Learned Helplessness Learning Value Mastery Orientation Math Anxiety Mathematical Interests Mathematical Self-Concept Mathematics Anxiety Mathematics Goals Mathematics Self-Efficacy Mathematics Self-Efficacy and Anxiety Mathematics Student Identity Modelling Self-Efficacy in Differential Equations Perceptions of and Interest in STEM Careers perceptions of skill of average incoming freshman; opinions of the importance of the skill or topic for college mathematics Preferences for Mathematical Representations Problem-Solving Beliefs Psychological Response to Immediacy Self Determination Self Perception of Quantitative Skills Self-Confidence in their Mathematics Ability Self-construct Self-efficacy Self-Efficacy for Learning Self-Evaluation of Numerical Competence Sense of Belonging Servant Leadership Assessment Statistics and technology attitudes Statistics Anxiety Statistics Attitudes, Perceptions, Beliefs Student Attitudes Toward Mathematics and Self-Efficacy Student Confidence in Ability to Succeed in Mathematics Student Interest and Confidence Student Motivation in Studying Mathematics Student Opinion of Instruction Student Perception of Self Mathematical Understanding and Attitude Towards Mathematics Student Perceptions of their Learning Environment Student View of Proof Students' Estimate of their Performance Students' Motivation and Self-Concept Students' Motivation and Use of Learning Strategies Students' Views on Math and their Learning of Math Summative Assessment Preferences Value, Expectancy of Success, and Cost Associated with the Use of Technology in Mathematical Instruction View of Proof, Attitude and Beliefs Regarding Proofs, and their Choices for Arguments from Four Mathematical Statements	Academic Maturity Calculator and/or Computer Use Career Goals Cognition Comfort using Technology/Facebook Emotional Regulation and Coping Engagement Homework Behavior Hyperactivity Learning Strategies Mathematical Cognition Mathematical Thinking Regarding Derivative Metacognition/Self-Monitoring Metacognitive Strategies Problem-Solving Behaviour Reasoning about distributions Risk Taking Solution Strategies	Approaches to Learning Approaches to Studying and Learning & Conceptions of Mathematics Approaches to Teaching Calculator Usage Extensiveness and Subordinality Classroom Culture/Climate Cognitive Domains Complex Real-World Tasks Effectiveness of Planning and Implementation Factors that Affect Student Success in First Year Mathematics Good Teaching; Technology Use; Ambitious Teaching Group Work Experiences Implementation of Inquiry-Oriented Instruction Instructional Characteristics Instructional Immediacy Behaviors Instructional Practice and Teaching Instructional Strategies Language used in statistics teaching & learning Learning Approaches, Experiences of Teaching-Learning Environments, and Self-Efficacy Learning Styles Level of Student Activity in the Classroom Motivation and Learning Strategies Openness to IBL Opportunity to Learn Perceptions of Diversity & Equity Perceptions of Online Math Courses Perceptions of Teacher Traits Perceptions of Transmissionism Professional Development & Related Construct Professional Noticing Quantifies Time Spent on Various Classroom Tasks Statistical teaching practices Statistical teaching practices and beliefs Statistical teaching practices, beliefs, and preparation Student Demographics Student Demographics, Motivation, and Learning Student Demographics, Motivation, Learning, Work Habits, and Use of Support Services Student Errors Student Expectations of their Work in a Math Class Student Feedback About Subjects Teacher Facilitation and Student Engagement Teacher Facilitation, Student Engagement, Design Practice

Constructs Organized into Bins

Knowledge Bin

Ability to Estimate Operations
Absolute Value
Abstract Algebra
Achievement/Knowledge
Algebra
Algebra and Trigonometry
Algebra Readiness
Algebra Skills for Engineering
Algebra, Geometry, Calculus, Trigonometry, and Probability
Algebra, Trigonometry, and Differential Calculus
Algebra, Trigonometry, Geometry, Calculus for Engineering and Science
Algebraic Thinking
Analytical Reasoning
Application of Knowledge, Reasoning, Skills and related constructs
Architecture Mathematical Application Skills
Area & Volume
Arithmetic
Arithmetic and Algebra
Arithmetic Fluency
Arithmetic related to drug calculations
Arrow Diagrams and Chain Rule
Basic Calculus Competency
Basic Mathematical Skills
Business Mathematics
Calculus
Calculus Readiness
Central Tendency
Cognitive Demand of Calculus Test Items
College Algebra
College Readiness
Competence in University Mathematics
Computational Estimation Skills
Concept Construction of Eigenvalues and Eigenvectors
Conceptual and Procedural Calculus III
Conceptual Math
Conceptual Understanding of Calculus
Conceptual Understanding of Function
Conceptual Understanding of Group Theory
Conditional Inference
Coordination of Algebraic and Graphical Representations
Counting
Creativity
Curricular Knowledge
Data Analysis
Degree of Control and Correctness for Solving Combinatorial Problems
Descriptive Geometry
Diagnostic Algebra Test
Diagnostic Testing at for Third Level Readiness (Ireland)
Differential and Integral Calculus
Differential Calculus
Differential Equations
Differential Equations Skill Problems and Conceptual Understanding
Elementary Algebra
Exponential Functions
Exponents
Expressions, Equations, and Inequalities
Flexible Procedural Understanding of the Derivative
Formal statistical inference
Fractions & Decimals
Fractions/Rational Numbers
Fragmented and Cohesive Conceptions of Thematics
Functions
Fundamental Concepts of Calculus of a Real Variable
Fundamental Concepts of Precalculus
General Understanding of Calculus Problems
Geometric Approach to Solving Differential Equations
Geometric Reasoning
Geometric Related Rates
Geometric Thought
Geometric Transformations
Geometry
Graphing
Group Theory
Implicit Differentiation and Integration by Parts
Incoming Student Placement Advisory Assessment
Indices, Factorization, Linear Equations, Surds, Exponential and Logarithmic Equations, Trigonometry, Functions, Graphs, Differentiation and Integration
Inferential reasoning
Integral Calculus
Integrals, Sequences and Series
Intellectual Abilities
Interpretating the Graph of a Function and Constructing its' Derivative Graph
Knowledge for Algebra Teaching
Limits
Linear Algebra
Linear Functions
Logical Reasoning
Math Problems in a Nursing Context
Math Scaffolding Required
Math Vocabulary
Mathematical Computations and Word Problems in a Biological Context
Mathematical Content Knowledge
Mathematical Equality
Mathematical Knowledge
Mathematical Literacy
Mathematical Modelling Process
Mathematical Pedagogical Content Knowledge
Mathematics (general)
Mathematics Problem Solving
Matrices
MCK and (M)PCK
Measurement
Measurement Estimation
Mechanical Reasoning
Mental Computation
MKT Mathematical Knowledge for Teaching
Modeling
Multiplicative Reasoning
Multivariable Calculus
Null Hypothesis Significance Testing
Number and Algebra, Functions, Geometry, and Trigonometry and Introductory Calculus
Number and Operations
Number Facility, Quantitative Reasoning, and Computation Estimation
Number Line
Number Sense
Numbers and Operations
Numeracy Estimation
Numeracy for Sports and Exercise Science
Numerical Operations
Pattern Analysis/Recognition
Pedagogical Content Knowledge
Pre-Algebra
Pre-Algebra, Algebra, Precalculus, Calculus
Precalculus
Precalculus and Calculus Content Knowledge
Precalculus prerequisites
Precalculus Skills
Preparation for statistics
Preparation to learn statistics
Prior Knowledge for Advanced Mathematics
Probability
Probability and Statistics
Probability Reasoning
Problem Posing
Problem Solving
Procedural and Conceptual Skill for Linear Equations in Two Variables
Procedural Knowledge of Exponential and Logarithmic Expressions
Procedural Knowledge of Rational Expressions
Proof
Proof Comprehension
Proof Construction
Proportional Reasoning
Proving
Pythagorean Theorem
Quadratics
Quantitative Analysis
Quantitative Reasoning
Rate of Change
Rate of Change and Tangents
Readiness for College Algebra and Precalculus
Readiness to Learn Calculus
Real Analysis
Reasoning
Reproducing and Meaning Orientations
Reversible Algebra Techniques (factor/expand and solve/verify)
Skill with Exponential Expressions
Spatial Ability
Spatial Ability/Geometry
Spatial Reasoning
Statistical graphs
Statistical knowledge for teaching
Statistical literacy
Statistical Reasoning
Statistical thinking
Statistical Understanding
Statistical Variation
Statistics Content Knowledge
Student Learning in Numerical Methods Course
Student Performance and Use of Computational Tools
Students' Conceptions of Real Numbers, Infinity and Functions
Theorem and Proof Comprehension
Transfer of Exponentials and Logarithms to Physics, Computer Science, and Microbiology
Triangle Properties and/or Special Right Triangles
Trigonometry
Undergraduate Engineering Mathematics
Understanding of Limits of Trigonometric Functions
Understanding of Sequences
Usable Knowledge
Variable Misconceptions
Vector Calculation Skills
Visualization Literacy
Ways of Thinking Mathematically
Word Problems