Instructional Content Constructs

- Curricular Coherence
 - Curricular Structure
- Curricular Focus
 - Exposure Time (OTL)
- Curricular Rigor
 - Level of Cognitive Complexity

Top Achieving Countries' Mathematics Curriculum

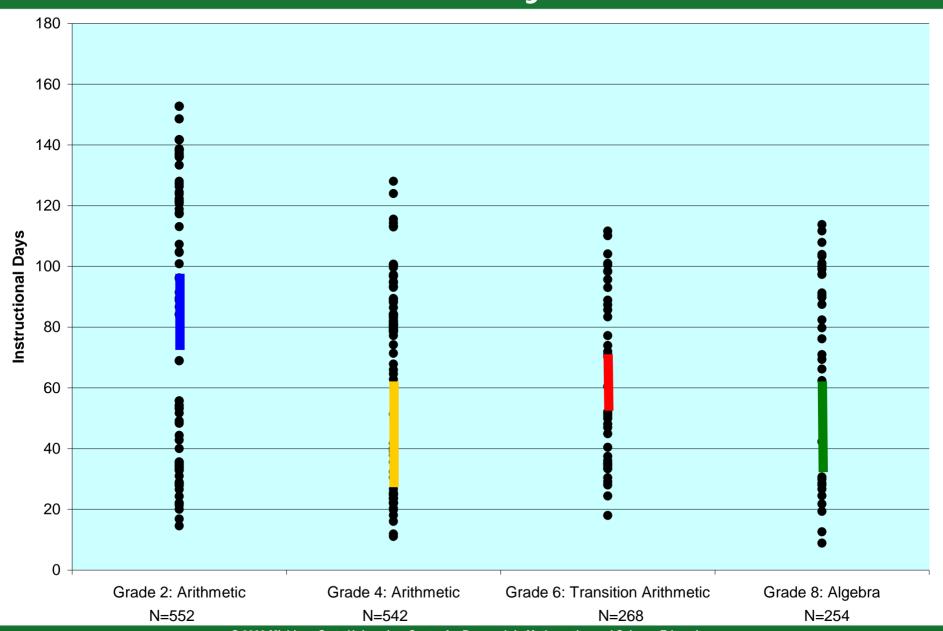
	Gra					ade		
Торіс	1	2	3	4	5	6	7	8
Whole Number: Meaning				•	•			
Whole Number: Operations					•			
Measurement Units	•						•	
Common Fractions			*			•		
Equations & Formulas			•	•	•	•		
Data Representation & Analysis			•	•	•			•
2-D Geometry: Basics			•	•	•	•		
2-D Geometry: Polygons & Circles				•	•			
Measurement: Perimeter, Area & Volume				•	•	•	•	•
Rounding & Significant Figures				•	•			
Estimating Computations					•	•		
Whole Numbers: Properties of Operations					•			
Estimating Quantity & Size				•	*			
Decimal Fractions						•		
Relation of Common & Decimal Fractions				•				
Properties of Common & Decimal Fractions					•	•		
Percentages					•	•		
Proportionality Concepts					•	•	•	•
Proportionality Problems					•			
2-D Geometry: Coordinate Geometry					•	•	•	•
Geometry: Transformations						•	•	•
Negative Numbers, Integers, & Their Properties						•	•	
Number Theory							•	•
Exponents, Roots & Radicals							•	•
Exponents & Orders of Magnitude							•	•
Measurement: Estimation & Errors							•	
Constructions Using Straightedge & Compass								•
3-D Geometry							•	
Geometry: Congruence & Similarity								
Rational Numbers & Their Properties								•
Patterns, Relations & Functions								•
Proportionality: Slope & Trigonometry								•

- Intended by 4 out of the 6 top-achieving countries
- Intended by all but one of the top-achieving countries (5 out of 6).
- Intended by all of the top-achieving countries.

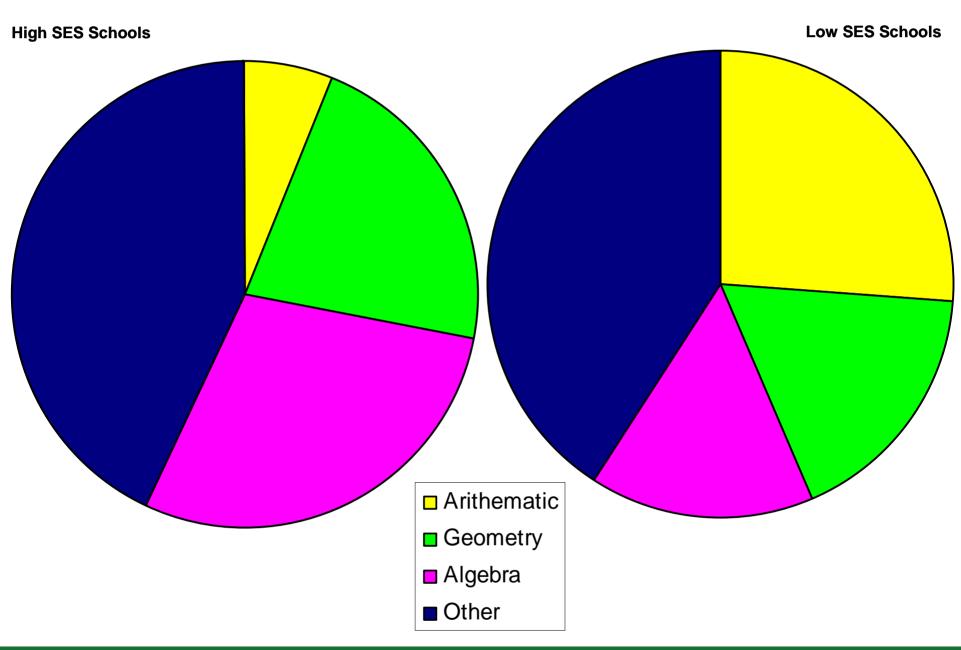
21 States' Mathematics Standards

State A	State F	State K	State P	State U	State D	State S
Topics G1 G2 G3 G4 G5 G6 G7 G8	Topics G1 G2 G3 G4 G5 G6 G7 G8	Topics G1 G2 G3 G4 G5 G6 G7 G8	Topics G1 G2 G3 G4 G5 G6 G7 G8	Topics G1 G2 G3 G4 G5 G6 G7 G8	Topics G1 G2 G3 G4 G5 G6 G7 G8	Topics G1 G2 G3 G4 G5 G6 G7 G8
Whole Number Meaning Whole Number Operations						
Measurement Units	Measurement Units • • • • • • • • • • • • • • • • • • •	Measurement Units • • • • • • • Common Fractions • • • • • • • • • • • • • • • • • • •	Measurement Units Common Fractions	Measurement Units • • • • • • • • • • • • • • • • • • •	Measurement Units • • • • • • • • • • • • • • • • • • •	Measurement Units Common Fractions
Equations & Formulas • • • • • • •	Equations & Formulas	Equations & Formulas • • • • •				
Data Representation & Analysis • • • • • • • • • • • • • • • • • •	Data Representation & Analy • • • • • • • • • • • • • • • • • • •	Data Representation & Analy 2-D Geometry Rasins	Data Representation & Analy 2-D Geometry: Basics	Data Representation & Analy 2-D Geometry: Basics	Data Representation & Analy	Data Representation & Analy
Polygons & Circles • • • • • •	Polygons & Circles • • • • • • •	Polygons & Circles • • • • • • •	Polygons & Circles • • • • • • •	Polygons & Circles • • • • • • •	Polygons & Circles • • • • • •	Polygons & Circles • • • • • •
Perimeter, Area & Volume Rounding & Significant Figures	Perimeter, Area & Volume Rounding & Significant Figures	Perimeter, Area & Volume Rounding & Significant Figures	Perimeter, Area & Volume Rounding & Significant Figures	Perimeter, Area & Volume Rounding & Significant Figur Rounding & Significant Figur	Perimeter, Area & Volume Rounding & Significant Figures	Perimeter, Area & Volume Rounding & Significant Figures
Estimating Computations • • • • • • •	Estimating Computations • • • • • • •	Estimating Computations • • • • • • •	Estimating Computations • • • • • • •	Estimating Computations • • • •	Estimating Computations • • • • • •	Estimating Computations • • • • •
Properties of Whole Number Operation: • • • • • • • • • • • • • • • • • • •	Properties of Whole Number Operations Estimating Quantity & Size	Properties of Whole Number Operations Estimating Quantity & Size	Properties of Whole Number • • • • • • • • • • • • • • • • • • •	Properties of Whole Number • • • • • • • • • • • • • • • • • • •	Properties of Whole Number Estimating Quantity & Size	Properties of Whole Number Estimating Quantity & Size
Decimal Fractions	Decimal Fractions • • • • • • •	Decimal Fractions • • • • •	Decimal Fractions • • • • • •	Decimal Fractions • • • • • •	Decimal Fractions • • • • •	Decimal Fractions • • • • • • •
Relationship of Common & Decimal Fra Properties of Common & Decimal Fract	Relationship of Common & E Properties of Common & Decimal Fractions	Relationship of Common & Decimal Fractions Properties of Common & Decimal Fractions	Relationship of Common & D Properties of Common & Decimal Fractions	Relationship of Common & D Properties of Common & Dec	Relationship of Common & Decimal Fra: Properties of Common & Decimal Fractions	Relationship of Common & C Properties of Common & De:
Percentages • • • •	Percentages • • • •	Percentages • • • • •	Percentages	Percentages • • • • • • •	Percentages • • • •	Percentages • • • • • •
Proportionality Concepts Proportionality Problems						
2-D Coordinate Geometry	2-D Coordinate Geometry • • • • • • • • • • • • • • • • • • •	2-D Coordinate Geometry	2-D Coordinate Geometry Geometry: Transformations	2-D Coordinate Geometry	2-D Coordinate Geometry • • • • •	2-D Coordinate Geometry Geometry: Transformations
Geometry: Transformations Negative Numbers, Integers & Their Properties	Negative Numbers, Integers & Their Properties	Geometry: Transformations • • • • • • • • • • • • • • • • • • •	Negative Numbers, Integers & Their Propertie:	Geometry: Transformations • • • • • • • • • • • • • • • • • • •	Geometry: Transformations Negative Numbers, Integers & Their Properties	Negative Numbers, Integers & Their Pro
Number Theory • • • • • • • • • • • • • • • • • • •	Number Theory Exponents. Roots & Radical:	Number Theory Exponents, Roots & Radicals	Number Theory Exponents. Roots & Radicals	Number Theory Exponents, Roots & Radicals	Number Theory Exponents, Roots & Radicals • • •	Number Theory Exponents, Roots & Radicals
Exponents & Orders of Magnitude • • • • • •	Exponents & Orders of Magnitude	Exponents & Orders of Magnitude	Exponents & Orders of Magnitude	Exponents & Orders of Magnitude • • • •	Exponents & Orders of Magnitude	Exponents & Orders of Magnitude • • • •
Measurement Estimation & Errors Constructions w/ Straightedge & Compass	Measurement Estimation & E ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●	Measurement Estimation & E Constructions w/ Straightedge & Compass	Measurement Estimation & E • • • • • • • • • • • • • • • • • •	Measurement Estimation & E • • • • • • • • • • • • • • • • • •	Measurement Estimation & E ● Constructions w/ Straightedge & Compass	Measurement Estimation & E Constructions w/ Straightedg
3-D Geometry • • • • • • •	3-D Geometry • • • • • • •	3-D Geometry • • • • • • •	3-D Geometry • • • • • • •	3-D Geometry • • • • • • •	3-D Geometry • • • • • •	3-D Geometry • • • • • • •
Congruence & Similarity Rational Numbers & Their Properties	Congruence & Similarity Rational Numbers & Their Properties	Congruence & Similarity Rational Numbers & Their Properties	Congruence & Similarity • • • • • • • • • • • • • • • • • • •	Congruence & Similarity Rational Numbers & Their Properties	Congruence & Similarity Rational Numbers & Their Properties	Congruence & Similarity Rational Numbers & Their Properties
Patterns, Relations & Functions	Patterns, Relations & Functic • • • • • • •	Patterns, Relations & Functic ● ● ● ● ● ●	Patterns, Relations & Functic • • • • • • •	Patterns, Relations & Functic • • • • • • •	Patterns, Relations & Functic • • • • • • •	Patterns, Relations & Functic • • • • • • •
Slope & Trigonometry						
State B	State G	State L	State Q	State E	State I	State O
Topics G1 G2 G3 G4 G5 G6 G7 G8	Topics G1 G2 G3 G4 G5 G6 G7 G8	Topics G1 G2 G3 G4 G5 G6 G7 G8	Topics G1 G2 G3 G4 G5 G6 G7 G8	Topics G1 G2 G3 G4 G5 G6 G7 G8	Topics G1 G2 G3 G4 G5 G6 G7 G8	Topics G1 G2 G3 G4 G5 G6 G7 G8
Whole Number Meaning Whole Number Operations	Whole Number Meaning • • • • • • • • • • • • • • • • • • •	Whole Number Meaning Whole Number Operations	Whole Number Meaning Whole Number Operations	Whole Number Meaning Whole Number Operations	Whole Number Meaning	Whole Number Meaning
Measurement Units Common Fractions	Measurement Units Common Fractions	Measurement Units	Measurement Units	Measurement Units Common Fractions	Measurement Units Common Fractions	Measurement Units Common Fractions
Equations & Formulas • • • • • • •	Equations & Formulas	Equations & Formulas • • • • • • •	Equations & Formulas • • • • • • •	Equations & Formulas	Equations & Formulas	Equations & Formulas • • • • • • •
Data Representation & Analysis • • • • • • • • • • • • • • • • • •	Data Representation & Analy 2-D Geometry: Basics	Data Representation & Analy	Data Representation & Analy	Data Representation & Analy • • • • • • • • • • • • • • • • • • •	Data Representation & Analy • • • • • • • • • • • • • • • • • • •	Data Representation & Analy 2-D Geometry: Basics
Polygons & Circles • • • • • • •	Polygons & Circles • • • • • •	Polynops & Circles	Polygons & Circles • • • • • •	Polygons & Circles • • • • • •	Polygons & Circles • • • • • • •	Polygons & Circles • • • • • • •
Perimeter, Area & Volume Rounding & Significant Figures	Perimeter, Area & Volume	Perimeter, Area & Volume Rounding & Significant Flour	Perimeter, Area & Volume Rounding & Significant Figur	Perimeter, Area & Volume Rounding & Significant Figur	Perimeter, Area & Volume Rounding & Significant Figur	Perimeter, Area & Volume Rounding & Significant Figures
Estimating Computations • • • • • •	Estimating Computations • • • •	Estimating Computations • • • • • • •	Estimating Computations • • • • • • •	Estimating Computations • • • • • •	Estimating Computations • • • • • • •	Estimating Computations
Properties of Whole Number Operation: Estimation Quantity & Size	Properties of Whole Number Estimating Quantity & Size	Properties of Whole Number Estimation Quantity & Size	Properties of Whole Number • • • • • • • • • • • • • • • • • • •	Properties of Whole Number Oper Estimating Quantity & Size	Properties of Whole Number Estimating Quantity & Size Size Size Size Size Size Size Size Size Size Size Siz	Properties of Whole Number • • • • • • • • • • • • • • • • • • •
Decimal Fractions • • • • • •	Decimal Fractions • • • •	Decimal Eractions	Decimal Fractions • • • • • •	Decimal Fractions • • • • •	Decimal Fractions • • • • • • •	Decimal Fractions • • • •
Relationship of Common & Decimal Fra Properties of Common & Decimal Fractions	Relationship of Common & Decimal Fractions Properties of Common & Decimal Fractions	Relationship of Common & C	Relationship of Common & D Properties of Common & Decimal Fractions	Relationship of Common & Decimal Fra: Properties of Common & Decimal Fractions	Relationship of Common & Decimal Fractions Properties of Common & Decimal Fractions	Relationship of Common & Decimal Fractions Properties of Common & Decimal Fractions
Percentages • • • •	Percentages • • • • •	Percentages • • • •	Percentages • • •	Percentages • • • •	Percentages • • •	Percentages • • •
Proportionality Concepts Proportionality Problems	Proportionality Concepts Proportionality Problems	Proportionality Concepts • • • • • • Proportionality Problems • • • • • • • • • • • • • • • • • • •	Proportionality Concepts Proportionality Problems	Proportionality Concepts Proportionality Problems	Proportionality Concepts Proportionality Problems	Proportionality Concepts Proportionality Problems
2-D Coordinate Geometry	2-D Coordinate Geometry • • • • • • •	2-D Coordinate Geometry • • • • • • • • • • • • • • • • • • •	2-D Coordinate Geometry	2-D Coordinate Geometry	2-D Coordinate Geometry • • • • • • •	2-D Coordinate Geometry • • • • • • •
Geometry: Transformations Negative Numbers, Integers & Their Properties	Geometry: Transformations • • • • • • • • • • • • • • • • • • •	Negative Numbers, Integers ● ● ● ● ● ●	Geometry: Transformations • • • • • • • • • • • • • • • • • • •	Geometry: Transformations Negative Numbers, Integers & Their Propertie:	Geometry: Transformations • • • • • • • • • • • • • • • • • • •	Geometry: Transformations Negative Numbers, Integers & Their Propertie:
Number Theory Exponents, Roots & Radicals	Number Theory Exponents, Roots & Radicals	Number Theory Exponents Roots & Radicals	Number Theory Exponents. Roots & Radicals	Number Theory Exponents, Roots & Radicals	Number Theory Exponents, Roots & Radicals	Number Theory Exponents, Roots & Radicals • • •
Exponents, Rooss & Radicals Exponents & Orders of Magnitude	Exponents, Roots & Radicals Exponents & Orders of Magnitude	Exponents & Orders of Magr. • • • • • • •	Exponents & Orders of Magnitude			
Measurement Estimation & Errors • • • • • • • • • • • • • • • • • • •	Measurement Estimation & E ● ● ● ● ● Constructions w/ Straightedge & Compass ● ● ●	Measurement Estimation & E Constructions w/ Strainbledg	Measurement Estimation & E Constructions w/ Straightedg	Measurement Estimation & E ● ● ● Constructions w/ Straightedge & Compass	Measurement Estimation & Errors Constructions w/ Straightedge & Compass	Measurement Estimation & E Constructions w/ Straightedge & Compass
3-D Geometry • • • • • •	3-D Geometry	3-D Geometry	3-D Geometry • • • • • • •	3-D Geometry • • • • •	3-D Geometry • • • • • • •	3-D Geometry
Congruence & Similarity Rational Numbers & Their Properties	Congruence & Similarity • • • • • • • • • • • • • • • • • • •	Congruence & Similarity	Congruence & Similarity • • • • • • • • • • • • • • • • • • •	Congruence & Similarity Rational Numbers & Their Properties	Congruence & Similarity • • • • • • Rational Numbers & Their Properties • • •	Congruence & Similarity Rational Numbers & Their Properties Rational Numbers & Their Properties
Patterns, Relations & Functions • • • • • • •	Patterns, Relations & Functic ● ● ● ● ● ●	Patterns, Relations & Functic • • • • • • •	Patterns, Relations & Functic • • • • • • •	Patterns, Relations & Functic ● ● ● ● ●	Patterns, Relations & Functic • • • • • • •	Patterns, Relations & Functic • • • • • • •
Slope & Trigonometry	Slope & Trigonometry	Slope & Trigonometry • • • • • • •	Stope & Trigonometry	Slope & Trigonometry	Slope & Trigonometry • • •	Slope & Trigonometry • • •
State C	State H	State M	State R	State J	State N	State T
Topics G1 G2 G3 G4 G5 G6 G7 G8	Topics G1 G2 G3 G4 G5 G6 G7 G8	Topics G1 G2 G3 G4 G5 G6 G7 G8			Topics G1 G2 G3 G4 G5 G6 G7 G8	Topics G1 G2 G3 G4 G5 G6 G7 G8
Whole Number Meaning Whole Number Operations	Whole Number Meaning Whole Number Operations	Whole Number Meaning Whole Number Coerations	Whole Number Operations	Whole Number Meaning Whole Number Operations	Whole Number Meaning Whole Number Operations	Whole Number Meaning Whole Number Operations
Measurement Units • • • • • •	Measurement Units • • • • • • •	Measurement Units • • • • • • •	Measurement Units • • • • • • •	Measurement Units • • • • • • •	Measurement Units • • • • • • •	Measurement Units • • • • • •
Common Fractions Equations & Formulas	Common Fractions Equations & Formulas	Common Fractions Equations & Formulas	Common Fractions Equations & Formulas	Common Fractions Equations & Formulas	Common Fractions Equations & Formulas	Common Fractions Equations & Formulas
Data Representation & Analysis • • • • • •	Data Representation & Analy • • • • • • •	Data Representation & Analy • • • • • • •	Data Representation & Analy • • • • • • •	Data Representation & Analy • • • • • • •	Data Representation & Analy • • • • • • •	Data Representation & Analy • • • • • • •
2-D Geometry: Basics Polygons & Circles	2-D Geometry: Basics • • • • • • • • • • • • • • • • • • •	2-D Geometry: Basics Polygons & Circles	2-D Geometry: Basics • • • • • • • • • • • • • • • • • • •	2-D Geometry: Basics • • • • • • • • • • • • • • • • • • •	2-D Geometry: Basics • • • • • • • • • • • • • • • • • • •	2-D Geometry: Basics Polygons & Circles
Perimeter, Area & Volume • • • • • •	Perimeter, Area & Volume • • • • • •	Perimeter, Area & Volume • • • • • •	Perimeter, Area & Volume • • • • • • •	Perimeter, Area & Volume Output Description:	Perimeter, Area & Volume	Perimeter, Area & Volume
Rounding & Significant Figures	Rounding & Significant Figures • • • • •	Rounding & Significant Figures • • •	Rounding & Significant Figur Estimating Computations	Rounding & Significant Figur Estimating Computations	Rounding & Significant Figures Estimating Computations	Rounding & Significant Figures Estimating Computations
Estimating Computations						
Estimating Computations • • • • • • • • • • • • • • • • • • •	Estimating Computations • • • • • • • • • • • • • • • • • • •	Estimating Computations Properties of Whole Number • • • •	Properties of Whole Number Operations	Properties of Whole Number • • • • • •	Properties of Whole Number Operations	Properties of Whole Number • • • • • •
Properties of Whole Number Operation: • • • • • • • • • • • • • • • • • • •	Properties of Whole Number Estimating Quantity & Size	Properties of Whole Number Estimating Quantity & Size	Properties of Whole Number Operations Estimating Quantity & Size Decimal Fractions			
Properties of Whole Number Operation: • • • • • • • • • • • • • • • • • • •	Properties of Whole Number Estimating Quantity & Size Definating Customs Relationship of Common & C	Properties of Whole Number Estimating Quantity & Size Decimal Fractions Relationship of Common & Decimal Fractions	Estimating Quantity & Size Decimal Fractions Relationship of Common & C • • • • • • •	Properties of Whole Number Estimating Quantity & Size Decimal Fractions Relationship of Common & E	Properties of Whole Number Operations Estimating Quantity & Size Decimal Fractions Relationship of Common & Decimal Fractions	Properties of Whole Number Estimating Quantity & Size Decimal Fractions Relationarity of Common & C
Properties of Whole Number Operation: Estimating Quantity & Size Becimal Fractions Relationship of Common & Decimal Fractions Properties of Common & Decimal Fractions	Properties of Whole Number Estimating Quantily & Size Decimal Fractions Relationship of Common & E Properties of Common & Decimal	Properties of Whole Namber Estimating Quantity & Size Decimal Fractions Relationship of Common & Decimal Fractions Properties of Common & Decimal Fractions	Estimating Quantity & Size Decimal Fractions Relationship of Common & E Properties of Common & Decimal Fractions	Proporties of Whole Number Estimating Quantity & Size Decimal Fractions Relationship of Common & C Proporties of Common & C	Properties of Whole Number Operations Estimating Quantity & Sizee Decimal Fractions Relationship of Common & Decimal Fractions Properties of Common & Decimal Fractions	Properties of Whole Number Estimating Quantity & Size Docimal Fractions Relationship of Common & C Relationship of Common & C Properties of Common & Decimal Fractions
Properties of Whole Number Operations Estimating Quantity & Size Decimal Fractions Relationship of Common & Decimal Fractions Properties of Common & Decimal Fractions Percentages Percentages Proportionally Concepts	Properties of Whole Number Estimating Quantity & Size Docima Fractions Relationship of Common & C Properties of Common & D Properties of Common & Docimal Percentages Proportionality Concepts	Properties of Whole Number Estending Quantity & Size Docimal Fractions Relationship of Common & Decimal Fractions Properties of Common & Decimal Fractions Preparations Common & Decimal Fractions Percentages Proportionality Concepts	Estimating Quantity & Size Decimal Fractions Relationship of Common & C Properties of Common & Decimal Fractions Percentinges Percentinges Percentinges	Properties of Whole Number Estantiant Quantify & Size Docimal Fractions Relationship of Common & E Properties of Common & E Properties of Common & Docimal Fractions Percentages Proportionally Concepts	Proporties of Whole Number Operations Estimating Quantity & Size Decimal Fractions Radiatorship of Common & Decimal Fractions Properties of Common & Decimal Fractions Percentages Percentages Percentages Percentages	Properties of Whole Number Estimating Quantity & Size Decimal Fractions Relationship of Common & C Properties of Common & C Properties of Common & Decimal Fractions Procretages Proportional play Concepts
Properties of Whole Number Operation: Estimating Quantity & Size Decimal Fractions Relationship of Common & Decimal Fractions Properties of Common & Decimal Fractions Properties of Common & Decimal Fractions Percoratages	Properties of Whole Number Estimating Quantity & Size Dodimal Fractions Relationship of Common & E Properties of Common & Decimal Percentages	Properties of Whole Number Estimating Quantity & Size Decimal Fractions Relationship of Common & Decimal Fractions Properties of Common & Decimal Fractions Percentages	Estimating Quantity & Size Decimal Fractions Relationship of Common & C Properties of Common & Decimal Fractions Percentages	Properties of Whole Number Estimating Quantity & Size Cockman Fractions Cockman Fractions Relationship of Common & Cockman Fractions Proceedings of Common & December 1997 Proceedings Pro	Properties of Whole Number Operation Estimating Quartly & Size Docimal Fractions Antiboraby of Common & Decimal Fractions Properties of Common & Decimal Fractions Proceedings	Properties of Whole Number Estimating Quantity & Size Docimal Factors Relationship of Common & L Properties of Common & Decimal Fractions Percentages Percentages
Properties of Whole Number Operations Estimating Quantity A, Size Oberinal's Fractions Statisticating by Common & Declinal's Fractions Properties of Common & Declinal's Fractions Properties of Common & Declinal's Fractions Proportionally Problems Proportionally Problems 2 O Condestas Geometry Geometry: Transformations	Proposites of Whole Number Estimating Quantity & Size Docional Fractions Relations to Relationship of Common &	Properties of Whole Number Estimating Quantity & Size Docimal Fractions Relationship of Common & Decimal Fractions Properties of Common & Decimal Fractions Procentings Proportionally Connepts Proportionally Problems 2 O Coordinate Geometry Geometry - Teachermations	Estimator Quantity & Size Relationship of Common & L Properties of Common & Decimal Fractions Prescringse Common & Decimal Fractions Prescringse Common & Trebeller Proportionally Probleme 2.0 Conditions Geometry Geometry Geometry Geometry Geometry Geometry Trebeller 2.0 Conditions Geometry	Proporties of Whole Number Estimating Quantity & Size Ocennal Fractions Relations Common & C Proporties of Common & Decimal Fractions Precordinates Proportionally Concepts Proportionally Problems 2-0 Coordinate Geometry Geometry - Transformations	Peopries of Whole Number Operations Estimating Quantity & Size Decimal Fractions Readitionship of Common & Decimal Fractions Peopries of Common & Decimal Fractions 2 D Coordinate Geometry Geometry Transformation	Proporties of Whole Number Statisting Quartity & Size Decimal Fractors Statisting Quartity & Size Properties of Common & C Properties of Common & Decimal Fractors Precontages Preportionally Concepts Proportionally Proteins 20 Coordinate Geometry Statisting
Properties of Whole Number Operation Estimating Quantity & Ears Decimal Fractions Relationship Quantity and Decimal Fractions Properties of Common & Decimal Fractions Properties of Common & Decimal Fractions Properties of Common & Decimal Fractions Proportionally Problems 2 O Coordinate Generally 2 O Coordinate Generally	Proposite of Whole Number Estimating Quarty & Size Docinal Fractions Relationship of Common & C Proposites of Common & C Proposites of Common & Debard Percentages Proportionally Concess Propositionally Concess Propositionally Concess Propositionally Concess Propositionally Concess Propositionally Concess Propositionally Concess Propositional Committee Sol Concessional Committee Gamenty Taracteromations Sol Concessional Proposition Sol	Proporties of Whole Number Estimating Quarties, Size Docimal Fractions Relationship of Common & Docimal Fractions Proporties of Common & Docimal Fractions Proporties of Common & Docimal Fractions Proportionally Problems 2 O Coordinate Comments Proportionally Problems 2 O Coordinate Comments	Estimating Quantity & Size Deban Financian Relationship of Common & C Properties of Common & C Properties of Common & C Properties of Common & C Proportionally Process Proportionality Process Proportionality Process 2 of Coordinating Common & C Quantity Transformations Q	Properties of Whole Number Estambling Country & Size Cocoma Practicors Cocoma Control & S. 1.6 Participation (Common & S. 1.6 Participation (Common & Decimal Fractions Proportionally Proceedings (Proportionally Problems 2.0 Cocomands (Common & Cocomands (Cocomands	Properties of Whole Number Operation Estimating Quarties & Exe Dociman Practices Assistancing John & Decland Fractions Assistancing of Common & Decland Fractions Properties of Common & Decland Fractions Properties of Concepts Gomentey, Transformation Gomentey, Transformation Regieve Montancies, Insigns a 1714	Properties of Whole Number 6 Estimating Quartly & Size Decimal Function Decimal Function Additionally of Common & C Additionally of Common & C Properties of Common A Decimal Functions Properties of Common A Decimal Functions Properties of Common A Decimal Properties of Common
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Instructional Days Spent on Selected Areas of Mathematics at Elementary and Middle Grades

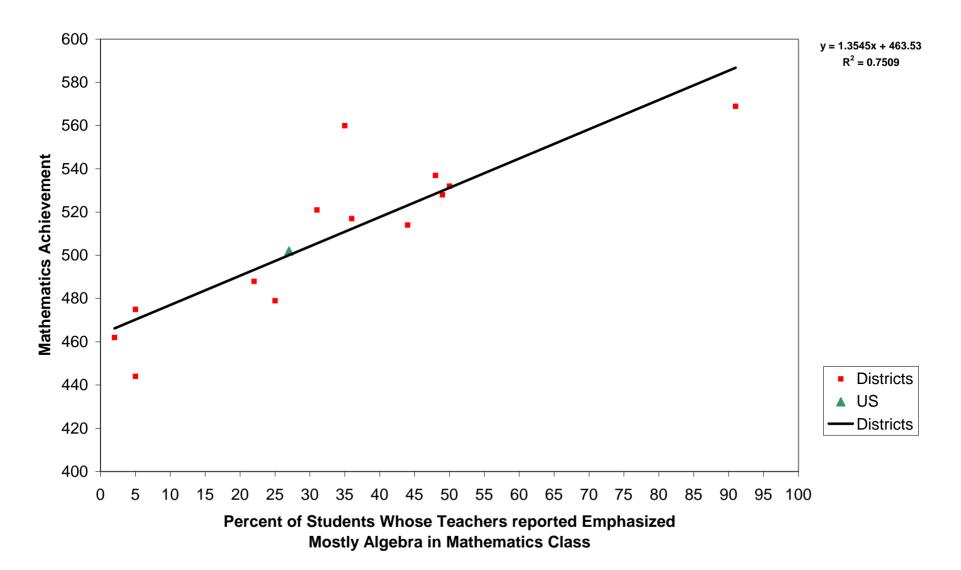


Teachers Coverage of Mathematics Topics in Two Types of Schools



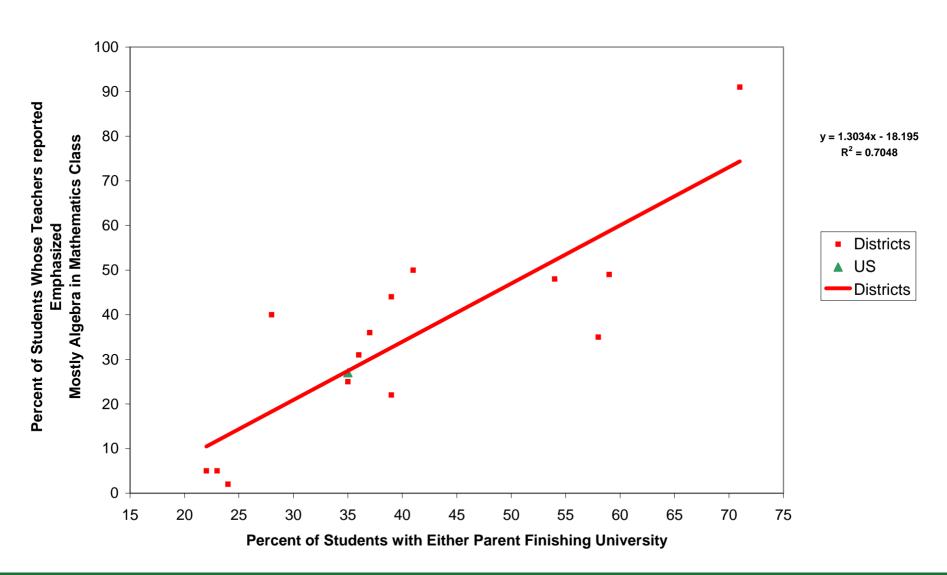
Relationship between Algebra Instruction and Student Achievement

1999 TIMSS-R Districts

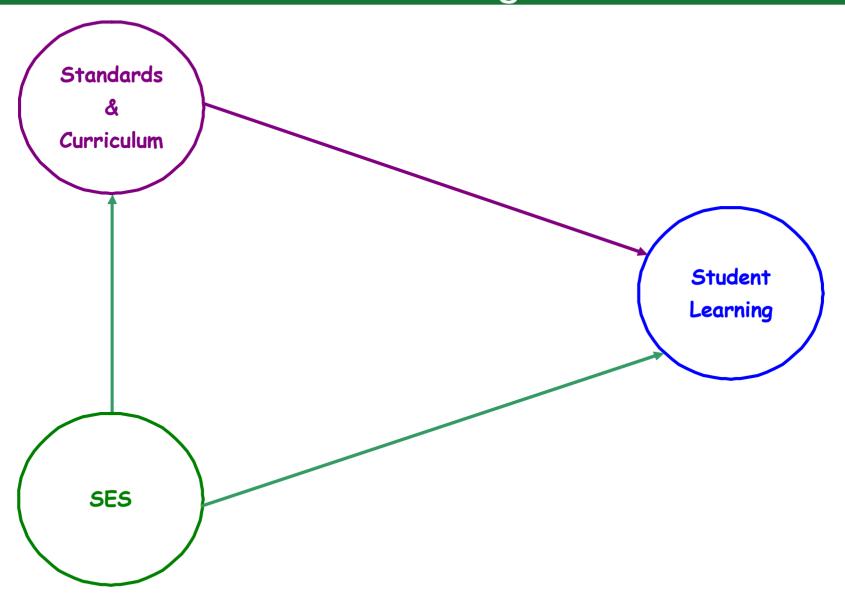


Relationship between Parents' Education and Algebra Instruction

1999 TIMSS-R Districts



Relationship between Curriculum, SES and Student Learning



Percentile Distribution of Function Knowledge of Sampled Future Teachers

