

SMMUSD GRADE 7-8 Core MATH CURRICULUM GUIDE							
SEMESTER 1-2 August - February							
Gr 6 Fall FIAB Division of Fraction by Fractions Gr 7 Fall FIAB Number System							
Aug - Sept 3 weeks <i>Accentuate the Negative</i>	Sept 3 weeks <i>Stretching and Shrinking</i>	Oct 3 weeks <i>Comparing and Scaling</i>	Nov 4 weeks <i>Moving Straight Ahead</i>	Dec 2 weeks <i>Shapes and Designs And Filling and Wrapping</i>	Jan 2 weeks <i>Filling and Wrapping; Say It With Symbols</i>	Jan 1 - 2 weeks <i>Samples and Populations</i>	Feb 2 weeks <i>What Do You Expect?</i>
Develop and use algorithms for rational operations; solve problems using rational numbers + Inspiring week of math —Stanford YouCubed Gr 7 OpenUp U5 Math Milestones 7:5; 7:9; 7:12 6:1 ** UNIT IABS for core 6 and core 7	Understand similar figures; analyze changes in area and perimeter Gr 7 OpenUp U1	Ratios, rates, and percent; develop and use strategies for solving problems requiring proportional reasoning Gr 7 OpenUp U4 Math Milestones 7:1; 7:8; 7:6; 7:11; 7:7	Recognize linear relationships by constant rate of change; understand equality and solve multi-step equations Gr 7 OpenUp U2 Math Milestones 7:3; 7:5; 7:6; 7:14; 6:8 ** UNIT IABS for core 6 and core 7	Angle relationships and equations and area and circumference of circles Gr 7 OpenUp U7/U3 Math Milestones 7:2; 7:13 ** UNIT IABS for core 6 and core 7	Understand and measure the volume of triangular and rectangular prisms, cones, spheres and cylinders; understand and measure the surface area of triangular and rectangular prisms; extend similarity and scale factor to 3D figures OpenUp Gr 7 U7/Gr8 U4 Math Milestones 7:10; 8:12	Deepen understanding of the process of statistical investigation and apply to sampling; explore measures of central tendency Gr 7 OpenUp U8	Experimental and theoretical probabilities; make connections between probability, rational numbers, geometry, stats, science, and business Gr 7 OpenUp U8-9 Math Milestones 7:4
7.NS.1 7.NS.2 7.NS.3 7.EE.A.1	7.RP.A.2a, 2b 7.RP.A.3 7.G.A.1 7.EE.B.3 7.EE.B.4	7.RP.2 a, b 7.RP.3 7.EE.3 7.EE.4 a 7.NS.3 7.RP.1	7.RP.2 7.EE.1 7.EE.2 7.EE.4 a, b	7.EE.4a 7.G.2 to 7.G.6	7.NS.3 7.EE.1 7.EE.2 7.G.1 7.G.6 7.G.3 7.G.9c 7.G.4	7.RP.2 7.NS.1 7.SP.1 to 7.SP.7a	7.RP.2 7.RP.3 7.SP.5 7.SP.6 7.SP.7 7.SP.8

Domains: RP: Ratios and Proportional Relationships; NS: The Number System; EE: Expressions and Equations; SP: Statistics and Probability; G = Geometry

MP1: Make sense of problems and persevere in solving them
MP2: Reason abstractly and quantitatively
MP3: Construct viable arguments and critique the reasoning of others
MP4: Model with mathematics

MP5: Use appropriate tools
MP6: Attend to precision
MP7: Look for and make use of structure
MP8: Look for and express regularity in repeated reasoning

Mathematical Practices 1-3-6 = connections to EL/ELD and NGSS standards: See Overview Curriculum Guide for details of grade expectations

*[Math Milestones \(7th grade\)](#) ([8th grade](#)) **[UNIT IABS](#) for core 6 and core 7 **CORE 7-8 OVERVIEW**

For Core Seven Mathematics, instructional time should focus on four [Critical Areas](#):

- (1) Developing understanding of and applying proportional relationships.
- (2) Developing understanding of operations with rational numbers and working with expressions and linear equations.
- (3) Solve problems involving scale drawings and informal geometric constructions, and working with two- and three- dimensional shapes to solve problems involving area, surface area, and volume.
- (4) Drawing inferences about populations based on samples

SMMUSD COMMON GRADE 7-8 Core MATH CURRICULUM GUIDE				
SEMESTER 2 February - May				
Gr 6 Winter IAB The Number System Gr 7 Winter FIAB Ratios and Proportions				
Feb - March 2 weeks <i>Looking for Pythagoras</i>	March 2 weeks <i>Growing, Growing, Growing</i>	April - May 3 weeks <i>Say It With Symbols</i>	May 2 weeks <i>It's in the System</i>	May - June 3 weeks <i>Butterflies, Pinwheels, and Wallpaper</i>
Pythagorean Theorem, square and cube roots, and beyond rational numbers Gr 8 OpenUp U5 Math Milestones 8:3 ; 8:10	Scientific notation and exponent rules Gr 8 OpenUp U5	Write, determine and solve equivalent expressions and linear equations; understand and identify functions Gr 8 OpenUp U4 Math Milestones 8:1 ; 8:7 ; 8:9	Write and solve systems of linear relationships Gr 8 OpenUp U4 Math Milestones 8:1 ; 8:4	Transformational geometry; understanding congruence and similarity Gr 8 OpenUp U1 Math Milestones 8:5 ; 8:11
8.NS.1 8.NS.2 8.EE.2 8.G.6 8.G.7 8.G.8	8.EE.1 8.EE.3 8.EE.4	8.EE.6 8.EE.7 a, b 8.F.1 8.F.2 --Slope Intercept 8.F.3 8.F.4 8.F.5 --Scales of axis *Graph a line	8.EE.7.a 8.EE.8.a, b, c 8.F.3	8.G.1a, b, c 8.G.2 8.G.3 8.G.4 8.G.5

Domains: NS: The Number System; EE: Expressions and Equations; F = Functions; G = Geometry; SP: Statistics and Probability

MP1: Make sense of problems and persevere in solving them

MP2: Reason abstractly and quantitatively

MP3: Construct viable arguments and critique the reasoning of others

MP4: Model with mathematics

MP5: Use appropriate tools

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* [Math Milestones](#) ([7th grade](#)) ([8th grade](#)) ** [UNIT IABS](#) for core 6 and core 7

● **CORE 7-8 OVERVIEW**

Mathematical Practices 1-3-6 = connections to EL/ELD and NGSS standards: See Overview Curriculum Guide for details of grade expectations

For Core Eight Mathematics, instructional time should focus on three [Critical Areas](#):

- (1) Formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations.
- (2) Grasping the concept of a function and using functions to describe quantitative relationships.
- (3) Analyzing two- and three- dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem