

2018-2019 Pacing Guide

GSE Algebra I

Standards of Mathematical Practice

- 1 Make sense of problems and persevere in solving them.
- 2 Reason abstractly and quantitatively.
- 3 Construct viable arguments and critique the reasoning of others.
- 4 Model with mathematics.
- 5 Use appropriate tools strategically.
- 6 Attend to precision.
- 7 Look for and make use of structure.
- 8 Look for and express regularity in repeated reasoning.

#Days	Dates	Topics	Standards
26	August 9 - Sept. 14	Unit 1-Relationships Between Quantities & Expressions As in Coordinate Algebra, students will interpret the structure of expressions and solve problems related to unit analysis. The properties of rational and irrational numbers and operations with polynomials have been added as a preparation for working with quadratic functions later in the course. This content will provide a solid foundation for all subsequent units.	MGSE9-12.N.RN.2 MGSE9-12.N.RN.3 MGSE9-12.N.Q.1 MGSE9-12.N.Q.2 MGSE9-12.N.Q.3 MGSE9-12.A.SSE.1 MGSE9-12.A.SSE.1a MGSE9-12.A.SSE.1b MGSE9-12.A.APR.1
30	Sept. 17 - Oct. 30	Unit 2 - Reasoning with Linear Equations and Inequalities Students will analyze linear functions only. Students will (1) investigate key features of graphs; (2) create, solve, and model graphically linear equations and inequalities in one and two variables; (3) create, solve, and model graphically systems of linear equations and inequalities in two variables; (4) rearrange formulas to highlight a quantity of interest (5) recognize arithmetic sequences as linear functions. Some standards will be repeated in units 3, 4, and 5 as they apply to quadratics and exponentials. (Recall that many of the standards are extensions of middle school standards.)	MGSE9-12.A.CED.1 MGSE9-12.A.CED.2 MGSE9-12.A.CED.3 MGSE9-12.A.CED.4 MGSE9-12.A.REI.1 MGSE9-12.A.REI.3 MGSE9-12.A.REI.5 MGSE9-12.A.REI.6 MGSE9-12.A.REI.10 MGSE9-12.A.REI.11 MGSE9-12.A.REI.12 MGSE9-12.F.BF.1 MGSE9-12.F.BF.1a MGSE9-12.F.BF.2 MGSE9-12.F.IF.1 MGSE9-12.F.IF.2 MGSE9-12.F.IF.3 MGSE9-12.F.IF.4 MGSE9-12.F.IF.5 MGSE9-12.F.IF.6 MGSE9-12.F.IF.7 MGSE9-12.F.IF.7a MGSE9-12.F.IF.9
47	Oct. 31 - Jan. 25	Unit 3 – Modeling and Analyzing Quadratic Functions Students will analyze quadratic functions only. Students will (1) investigate key features of graphs; (2) solve quadratic equations by taking square roots, factoring ($x^2 + bx + c$ AND $ax^2 + bx + c$), completing the square, and using the quadratic formula; (3) compare and contrast graphs in standard, vertex, and intercept forms. Students will only work with real number solutions. Represent and solve equations and inequalities graphically.	MGSE9-12.A.SSE.2 MGSE9-12.A.SSE.3 MGSE9-12.A.SSE.3a MGSE9-12.A.SSE.3b MGSE9-12.A.CED.1 MGSE9-12.A.CED.2 MGSE9-12.A.CED.4 MGSE9-12.A.REI.1 MGSE9-12.A.REI.4 MGSE9-12.A.REI.4a MGSE9-12.A.REI.4b MGSE9-12.F.BF.1 MGSE9-12.F.BF.3 MGSE9-12.F.IF.1 MGSE9-12.F.IF.2 MGSE9-12.F.IF.4 MGSE9-12.F.IF.5 MGSE9-12.F.IF.6 MGSE9-12.F.IF.7 MGSE9-12.F.IF.7a MGSE9-12.F.IF.8 MGSE9-12.F.IF.8a MGSE9-12.F.IF.9

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24	Jan. 28 - March 1	Unit 4 - Modeling & Analyzing Exponential Functions Students will analyze exponential functions only. Students will (1) investigate key features of graphs; (2) create, solve, and model graphically exponential equations; (3) recognize geometric sequences as exponential functions.	MGSE9-12.A.CED.1 MGSE9-12.A.CED.2 MGSE9-12.A.REI.1 MGSE9-12.F.BF.1 MGSE9-12.F.BF.1a MGSE9-12.F.BF.2 MGSE9-12.F.BF.3 MGSE9-12.F.IF.1 MGSE9-12.F.IF.2 MGSE9-12.F.IF.3 MGSE9-12.F.IF.4 MGSE9-12.F.IF.5 MGSE9-12.F.IF.6 MGSE9-12.F.IF.7 MGSE9-12.F.IF.7e MGSE9-12.F.IF.9
19	March 4 - 29	Unit 6 – Describing Data Students will summarize, represent, and interpret data on a single count or measurement variable. Students will summarize, represent, and interpret data on two categorical and quantitative variables. Students will interpret linear models.	MGSE9-12.S.ID.1 MGSE9-12.S.ID.2 MGSE9-12.S.ID.3 MGSE9-12.S.ID.5 MGSE9-12.S.ID.6a,c MGSE9-12.F.LE.5 MGSE9-12.F.BF.3 MGSE9-12.F.IF.1 MGSE9-12.F.IF.2 MGSE9-12.F.IF.4 MGSE9-12.F.IF.5 MGSE9-12.F.IF.6 MGSE9-12.F.IF.7 MGSE9-12.F.IF.9
20	April 8 - May 3	Unit 5 – Comparing and Contrasting Functions Students will compare and contrast linear, quadratic, and exponential functions in this unit.	MGSE9-12.S.ID.7 MGSE9-12.S.ID.8 MGSE9-12.S.ID.9 MGSE9-12.F.LE.1 MGSE9-12.F.LE.1a MGSE9-12.F.LE.1b MGSE9-12.F.LE.1c MGSE9-12.F.LE.2 MGSE9-12.F.LE.3
9	May 6 - 15	EOCT Review and Test and Project based learning	
3	May 16 - 21	Final Exams	