

MIAMI-DADE COUNTY PUBLIC SCHOOLS

District Pacing Guide

Algebra 1

2020-2021

Course Code: 120031001

1 st Nine Weeks	2 nd Nine Weeks	3 rd Nine Weeks	4 th Nine Weeks																																																																																
Social Emotional Learning Resources Are Available for All Topics																																																																																			
~ Introduction to Online Learning I. Quantities and Modeling A. Quantitative Reasoning B. Algebraic Models STEM Lessons - Model Eliciting Activities • Looking for the best Employment Option • CollegeReview.com • Efficient Storage II. Understanding Functions A. Functions and Models B. Patterns and Sequences STEM Lessons - Model Eliciting Activities • To The Limit • My First Credit Card • Plants vs. Pollutants • The Friendly Confines or The Nat III. Linear Functions, Equations, and Inequalities – Part A A. Linear Functions B. Forms of Linear Equations	IV. Linear Functions, Equations, and Inequalities – Part B A. Forms of Linear Equations (Cont.) B. Linear Equations and Inequalities STEM Lessons - Model Eliciting Activities • Alternative Fuel Systems • Preserving Our Marine Ecosystems • Hybrid-Electric Vehicles vs. Gasoline-Powered Vehicles V. Statistical Models A. Multi-Variable Categorical Data B. One-Variable Data Distributions C. Linear Modeling and Regression STEM Lessons - Model Eliciting Activities • The Music Is On and Popping! Two-way Tables VI. Linear Systems A. Solving Systems of Linear Equations B. Modeling with Linear Systems STEM Lessons - Model Eliciting Activities • Manufacturing Designer Gear T-Shirts	VII. Exponential Relationships A. Rational Exponents and Radicals B. Geometric Sequences and Exponential Functions C. Exponential Equations and Models STEM Lessons - Model Eliciting Activities • The Friendly Confines or The Nat - who has the best ballpark? VIII. Polynomial Operations A. Adding and Subtracting Polynomials B. Multiplying Polynomials IX. Quadratic Functions A. Graphing Quadratic Functions B. Connecting Intercepts, Zeros, and Factors C. Graphing Polynomial Functions	X. Quadratic Equations and Modeling A. Using Factors to Solve Quadratic Equations B. Using Square Roots to Solve Quadratic Equations C. Linear, Exponential, and Quadratic Models STEM Lessons - Model Eliciting Activities • Ranking Sports Players (Quadratic Equations Practice) XI. EOC Review XII. Functions and Inverses A. Piecewise-Defined Functions B. Understanding Inverse Functions C. Graphing Square Root Functions D. Graphing Cube Root Functions																																																																																
Total Days Allotted for Instruction, Testing, and “Catch-up” Days: <table><tr><th>T</th><th>B</th><th>Dates</th></tr><tr><td>Topic ~</td><td>5</td><td>2</td><td>08/31-09/04</td></tr><tr><td>Topic I</td><td>12</td><td>6</td><td>09/08-09/23</td></tr><tr><td>Topic II</td><td>14</td><td>7</td><td>09/24-10/14</td></tr><tr><td>Topic III</td><td>6</td><td>3</td><td>10/15-10/22</td></tr><tr><td>Total</td><td>37</td><td>18</td><td></td></tr></table>	T	B	Dates	Topic ~	5	2	08/31-09/04	Topic I	12	6	09/08-09/23	Topic II	14	7	09/24-10/14	Topic III	6	3	10/15-10/22	Total	37	18		Total Days Allotted for Instruction, Testing, and “Catch-up” Days: <table><tr><th>T</th><th>B</th><th>Dates</th></tr><tr><td>Topic IV</td><td>16</td><td>8</td><td>10/26-11/18</td></tr><tr><td>Topic V</td><td>16</td><td>8</td><td>11/19-12/15</td></tr><tr><td>Topic VI</td><td>17</td><td>8</td><td>12/16-01/22</td></tr><tr><td>Total</td><td>49</td><td>24</td><td></td></tr></table>	T	B	Dates	Topic IV	16	8	10/26-11/18	Topic V	16	8	11/19-12/15	Topic VI	17	8	12/16-01/22	Total	49	24		Total Days Allotted for Instruction, Testing, and “Catch-up” Days: <table><tr><th>T</th><th>B</th><th>Dates</th></tr><tr><td>Topic VII</td><td>18</td><td>9</td><td>01/25-02/18</td></tr><tr><td>Topic VIII</td><td>9</td><td>4</td><td>02/23-03/03</td></tr><tr><td>Topic IX</td><td>16</td><td>8</td><td>03/04-03/25</td></tr><tr><td>Total</td><td>43</td><td>21</td><td></td></tr></table>	T	B	Dates	Topic VII	18	9	01/25-02/18	Topic VIII	9	4	02/23-03/03	Topic IX	16	8	03/04-03/25	Total	43	21		Total Days Allotted for Instruction, Testing, and “Catch-up” Days: <table><tr><th>T</th><th>B</th><th>Dates</th></tr><tr><td>Topic X</td><td>14</td><td>7</td><td>04/05-04/22</td></tr><tr><td>Topic XI</td><td>6</td><td>3</td><td>04/23-04/30</td></tr><tr><td>Topic XII</td><td>27</td><td>13</td><td>05/03-06/09</td></tr><tr><td>Total</td><td>47</td><td>23</td><td></td></tr></table>	T	B	Dates	Topic X	14	7	04/05-04/22	Topic XI	6	3	04/23-04/30	Topic XII	27	13	05/03-06/09	Total	47	23	
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THIS DOCUMENT IS SUBJECT TO CHANGE

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YEAR AT A GLANCE ACADEMIC SUPPORT				
REPORTING CATEGORY: ALGEBRA AND MODELING		% of Test: 41%	2019 Average % Correct: 42%	
Standards		Previous Grade Standards	Algebra I Topic(s)	Algebra II Standard
<u>MAFS.912.A-APR.1.1</u> Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.		<u>MAFS.6.EE.1.3</u> <u>MAFS.6.EE.1.4</u> <u>MAFS.7.EE.1.1</u> <u>MAFS.8.EE.1.1</u>	Topic IX	X
<u>MAFS.912.A-CED.1.1</u> Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational, absolute, and exponential functions. ★		<u>MAFS.7.EE.2.4</u> <u>MAFS.8.EE.3.7</u>	Topic I Topic VIII	X
<u>MAFS.912.A-REI.2.3</u> Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.		<u>MAFS.7.EE.2.4</u> <u>MAFS.8.EE.3.7</u>	Topic I	X
<u>MAFS.912.A-CED.1.4</u> Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. For example, rearrange Ohm's law $V = IR$ to highlight resistance R . ★				
<u>MAFS.912.A-CED.1.2</u> Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales. ★		<u>MAFS.8.EE.3.8</u> <u>MAFS.8.F.1.3</u> <u>MAFS.8.F.2.4</u>	Topic III Topic XII	X
<u>MAFS.912.A-REI.3.5</u> Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.		<u>MAFS.8.EE.3.8</u>		
<u>MAFS.912.A-REI.3.6</u> Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.		<u>MAFS.8.EE.3.8</u>	Topic VI	X
<u>MAFS.912.A-REI.4.12</u> Graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.				
<u>MAFS.912.A-CED.1.3</u> Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or non-viable options in a modeling context. For example, represent inequalities describing nutritional and cost constraints on combinations of different foods. ★			Topic VI	X