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Publisher Resource:
Math Nation

Other Course Supplemental Resources:

Khan Academy - Algebra 1
Khan Academy - Geometry
### Liberal Arts Mathematics 1

#### 2020-2021

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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Quarter 1</strong> Aug 10 – Oct 9</td>
<td></td>
</tr>
</tbody>
</table>
| 8/10 – 8/14 | Unit 1 – Expressions, Equations and Inequalities  
|           | 1-1 Using Expressions to Represent Real-World Situations  
|           | 1-2 Understanding Polynomial Expressions  
|           | 2-1 Equations: True or False? |                     |
| 2    | 8/17 – 8/21 | 2-2 Identifying Properties When Solving Equations  
|       | 2-3 Solving Equations  
|       | 2-5 Solving Inequalities - Part 1  
|       | 2-6 Solving Inequalities - Part 2 | **Solving Equations – Khan Academy**  
|       | **Solving Inequalities – Khan Academy** |                     |
| 3    | 8/24 – 8/28 | 2-7 Solving Compound Inequalities  
|       | 2-8 Rearranging Formulas  
|       | 2-9 Solution Sets to Equations with Two Variables  
|       | Activity, Review, Unit 1 Test | **Compound Inequalities – Khan Academy** |                     |
| 4    | 8/31 – 9/4 | Unit 2 - Introduction to Functions  
|       | 3-1 Input and Output Values  
|       | 3-2 Representing, Naming, and Evaluating Functions  
|       | 3-3 Adding and Subtracting Functions  
|       | 3-4 Multiplying Functions | **Evaluating Expressions with Two Variables - Khan Academy**  
|       | **Functions – Khan Academy**  
|       | **Representing Functions - Khan Academy** |                     |
| 5    | 9/7 – 9/11 | Labor Day Holiday – 9/7  
|       | 3-5 Closure Property  
|       | 3-7 Key Features of Graphs of Functions – Part 1  
|       | 3-8 Key Features of Graphs of Functions – Part 2  
|       | 3-9 Average Rate of Change Over an Interval  
|       | Activity | **Average Rate of Change - Khan Academy** |                     |
| 6    | 9/14 – 9/18 | Activity, Review, Unit 2 Test  
|       | Unit 3 - Introduction to Functions  
|       | 4-2 Rate of Change of Linear Functions  
|       | 4-3 Interpreting Rate of Change and y-Intercept in a Real-World Context - Part 1 | **Introduction to Functions - Khan Academy** |                     |
| 7    | 9/21 – 9/25 | 4-4 Interpreting Rate of Change and y-Intercept in a Real-World Context - Part 2  
|       | 4-5 Introduction to Systems of Equations | **Rate of Change - Kahn Academy**  
|       | **Systems of Equations - Khan Academy** |                     |
# Liberal Arts Mathematics 1

## 2020-2021

<table>
<thead>
<tr>
<th>8</th>
<th>9/28 – 10/2</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-6</td>
<td>Finding Solution Sets to Systems of Equations Using Substitution and Graphing</td>
</tr>
<tr>
<td>4-7</td>
<td>Using Equivalent Systems of Equations</td>
</tr>
<tr>
<td>4-8</td>
<td>Finding Solution Sets to Systems of Equations Using Elimination</td>
</tr>
<tr>
<td>4-9</td>
<td>Solution Sets to Inequalities with Two Variables</td>
</tr>
<tr>
<td>4-10</td>
<td>Finding Solution Sets to Systems of Linear Inequalities</td>
</tr>
<tr>
<td>Activity, Review</td>
<td></td>
</tr>
<tr>
<td>Unit 3 Test</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9</th>
<th>10/5 – 10/9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit 4 – Quadratic Equations and Functions – Part 1</td>
<td></td>
</tr>
<tr>
<td>5-1</td>
<td>Real-World Examples of Quadratic Functions</td>
</tr>
<tr>
<td>5-3</td>
<td>Solving Quadratic Equations by Factoring</td>
</tr>
</tbody>
</table>

Solutions to Two Variable Inequalities - [Khan Academy](https://khanacademy.org)

Solving Quadratic Equations by Factoring – [Khan Academy](https://khanacademy.org)

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</table>
| 1 10/12 – 10/16 | - Teacher Planning Day 10/12  
- PSAT 10/14  
- 5-7 Solving Quadratic Equations by Completing the Square  
- 5-9 Solving Quadratic Equations Using the Quadratic Formula |  |
| 2 10/19 – 10/23 | - 5-10 Quadratic Functions in Action  
- Activity, Review  
- Unit 4 Test |  |
| 3 10/26 – 10/30 | - Unit 5 – Quadratic Equations and Functions – Part 2  
- 6-1 Observations from a Graph of a Quadratic Function  
- 6-2 Nature of the Zeros of Quadratic Equations and Functions | Quadratics - Khan Academy  
Graphs of Quadratics - Khan Academy |
| 4 11/2 – 11/6 | - 6-4 Graphing Quadratic Functions Using the Vertex and Intercepts  
- 6-6 Graphing Quadratic Functions Using Vertex Form - Part 2  
- Activity, Review, Unit 5 Test |  |
| 5 11/9 – 11/13 | - Veterans Day 11/11  
- Unit 6 - Exponential Functions  
- 7-2 Exponential Functions  
- 7-3 Graphs of Exponential Functions - Part 1 | Exponential Functions - Khan Academy  
Graphs of Exponential Functions - Khan Academy |
| 6 11/16 – 11/20 | - 7-5 Growth and Decay Rates of Exponential Functions  
- Activity, Review, Unit 6 Test  
- Unit 7 - Summary of Functions  
- 8-1 Comparing Linear, Quadratic, and Exponential Functions - Part 1  
- 8-2 Comparing Linear, Quadratic, and Exponential Functions - Part 2 | Growth and Decay - Khan Academy  
Summary of Functions - Khan Academy |
| 7 11/23 – 11/24 | - 8-5 Modeling with Functions  
- Activity,  
- 8-10 Finding Zeros of Polynomial Functions of Higher Degree  
- Thanksgiving Holiday 11/25 - 11/27 | Zeros in Polynomials - Khan Academy |
<table>
<thead>
<tr>
<th></th>
<th>Date Range</th>
<th>Topics</th>
</tr>
</thead>
</table>
| 8   | 11/30 – 12/4 | • 8-12 Graphing Polynomial Functions of Higher Degree  
      |            | • Activity,  
      |            | • Review, Unit 7 Test  
      |            | • Unit 9 - AN Boot Camp and Radical and Rational Equations  
      |            | • Boot Camp/Test Yourself |
| 9   | 12/7 – 12/11 | • Boot Camp/Test Yourself |
| 10  | 12/14 – 12/18 | • Boot Camp/Test Yourself  
      |            | • Midterm Exams |

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| 1 1/5– 1/8 | • Unit 8 - One-Variable Statistics  
• 9-1 Dot Plots  
• 9-2 Histograms  
• 9-3 Box Plots - Part 1 | Dot Plots and Histograms - Khan Academy |
| 2 1/11 – 1/15 | • 9-3 Box Plots - Part 1  
• 9-4 Box Plots - Part 2  
• 9-5 Measures of Center and Shapes of Distributions | |
| 3 1/18 – 1/22 | • Martin Luther King Jr. Holiday 1/18  
• 9-6 Measures of Spread - Part 1  
• 9-7 Measures of Spread - Part 2 | |
| 4 1/25 – 1/29 | • 9-8 The Empirical Rule  
• 9-9 Outliers in Data Sets  
• Activity, Teacher Inservice 1/29 | The Emperical Rule - Khan Academy |
| 5 2/1 – 2/5 | • Activity, Review, Unit 8 Test  
• Unit 9 - AN Boot Camp and Radical and Rational Equations  
• Boot Camp/Test Yourself | |
| 6 2/8 – 2/12 | • Boot Camp/Test Yourself | |
| 7 2/15 – 2/19 | • Presidents Day Holiday 2/15  
• Boot Camp/Test Yourself | |
| 8 2/22 – 2/26 | • EOC – Algebra 1 Testing Window Opens 2/22  
• Unit G1 - Introduction to Geometry  
• 1-1 Basics of Geometry – Part 1  
• 1-2 Basics of Geometry – Part 2  
• Activity  
• 1-11 Basic Constructions – Part 1  
• 1-12 Basic Constructions – Part 2  
• 1-13 Constructing Perpendicular Bisectors | Basics of Geometry - Khan Academy |

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<tbody>
<tr>
<td>9</td>
<td>3/1 – 3/5</td>
</tr>
<tr>
<td></td>
<td>- Activity, Review, Unit G1 Test</td>
</tr>
<tr>
<td></td>
<td>- Unit G2 – Angles</td>
</tr>
<tr>
<td></td>
<td>- 2-1 Introductions to Angles – part 1</td>
</tr>
<tr>
<td></td>
<td>- 2-2 Introductions to Angles – part 2</td>
</tr>
<tr>
<td></td>
<td>- Activity</td>
</tr>
<tr>
<td></td>
<td>- 2-10 Copying Angles and Constructing Angle Bisectors</td>
</tr>
<tr>
<td></td>
<td>- Activity, Review, Unit G2 Test</td>
</tr>
<tr>
<td>10</td>
<td>3/8 – 3/11</td>
</tr>
<tr>
<td></td>
<td>- Unit G3 – Rigid Transformations and Symmetry</td>
</tr>
<tr>
<td></td>
<td>- 3-1 Introduction to Transformations</td>
</tr>
<tr>
<td></td>
<td>- 3-1 Examining and Using Transformations</td>
</tr>
<tr>
<td></td>
<td>- Activity</td>
</tr>
<tr>
<td></td>
<td>- 3-4 Examining and Using Reflections</td>
</tr>
</tbody>
</table>

Introduction to angles - [Khan Academy](https://khanacademy.org)

Angle Bisectors - [Khan Academy](https://khanacademy.org)

Transformations Introduction - [Khan Academy](https://khanacademy.org)

Reflections - [Khan Academy](https://khanacademy.org)
### Quarter 4
**Mar 15 – May 25**

<table>
<thead>
<tr>
<th>Week</th>
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<tbody>
<tr>
<td>1</td>
<td>SPRING BREAK – NO SCHOOL</td>
<td></td>
</tr>
</tbody>
</table>
| 2    | 3-4 Examining and Using Rotations  
     | Activity  
     | 3-10 Symmetries of Regular Polygons  
     | Activity, Review, Unit G3 Test | Rotations - Khan Academy  
     | Symmetries of Regular Polygons - Khan Academy |
| 3    | Unit G4 - Non-Rigid Transformations, Congruence, and Similarity  
     | 4-6 Congruence of Polygons  
     | 4-7 Similarity of Polygons  
     | Activity  
     | 5-4 Triangle Congruence – SSS and SAS – Part 1  
     | 5-6 Triangle Congruence – ASA and AAS – Part 1  
     | Activity  
     | 5-8 Base Angle of Isosceles Triangles  
     | Holiday 4/2 | Congruence of Polygons - Khan Academy  
     | Triangle Congruence - Khan Academy  
     | Base Angles of Isosceles Triangles - Khan Academy |
| 4    | 5-10 Using Triangle Congruency to Find Missing Variables  
     | Activity, Review,  
     | Unit G4 Test  
     | Unit G5 – Triangles  
     | 6-1 Triangle Similarity – Part 1 | Triangle Similarity - Khan Academy |
| 5    | 6-2 Triangle Similarity – Part 2  
     | Activity  
     | Unit G6 - Right Triangles and Trigonometry  
     | 7-1 The Pythagorean Theorem | Pythagorean Theorem - Khan Academy |
| 6    | 7-6 Right Triangles Similarity – Part 1  
     | 7-7 Right Triangles Similarity – Part 2  
     | Activity, Review, Unit G6 Test  
     | Unit G7 – Circles | Triangles and Similarity - Khan Academy |

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</table>
| 1    | 10-4 Constructing Inscribed Polygons in a Circle  
10-9 Constructing Inscribed and Circumscribed Circles of Triangles  
Activity | Constructing Inscribed Shapes - [Khan Academy](https://www.khanacademy.org) |
| 2    | Unit G8 - Three Dimensional Geometry  
11-4 Volume of Prisms and Cylinders  
11-6 Volume of Pyramids and Cones  
11-8 Spheres  
Activity | Volume of Cylinders and Cones - [Khan Academy](https://www.khanacademy.org)  
Volume of Prisms - [Khan Academy](https://www.khanacademy.org)  
Spheres - [Khan Academy](https://www.khanacademy.org) |
| 3    | 11-10 Geometric Design  
11-11 Volume in Real World Contexts  
Activity  
11-12 Density | Density - [Khan Academy](https://www.khanacademy.org) |
| 4    | 11-14 Cross Sections and Plane Rotations  
Activity, Review,  
Unit G8 Test | Cross Section and Plane Rotations - [Khan Academy](https://www.khanacademy.org) |
| 5    | Standards Review  
Final Exams |  
Final exams |
| 6    | Final exams |  
Final exams |