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Publisher Resource:

[CollegePrepAlgebra.com](http://CollegePrepAlgebra.com)

Other Course Supplemental Resources:
# Math for College Readiness

**Quarter 1**

**Aug 10 – Oct 13**

## Major Concepts / Topics

<table>
<thead>
<tr>
<th>Week</th>
<th>Major Concepts / Topics</th>
<th>Possible Resources</th>
</tr>
</thead>
</table>
| 1    | **Chapter 1 – The Real Number System**  
  - Lesson 1.1 - Real Numbers  
  - Lesson 1.2 - Add & Subtract Integers  
  - Lesson 1.3 - Multiplying & Dividing Integers and Lesson  
  - Lesson 1.4 - Operations with Rational Numbers  
  - Topic 20 - Real number operations  
  - Lesson 1.5 - Exponents and Properties of Real Numbers  
  - Topic 5 - Repeating Decimals  
  - Assessment  
  **Chapter 2 - Fundamentals of Algebra**  
  - Lesson 2.1 - Writing and Evaluating Algebraic Expressions  
  - Lesson 2.2 - Simplifying Algebraic Expressions  
  - Lesson 2.3 - Algebra and Problem Solving  
  - Lesson 2.4 - Introduction to Equations  
  - Assessment  
  **Chapter 3 - Equations, Inequalities, and Problem Solving**  
  - Unit 3 – Lesson 3.1 - Solving Linear Equations  
  - Lesson 3.2 - Equations that Reduce to Linear Form  
  - Lesson 3.3 - Problem Solving with Percents  
  - Lesson 3.4 - Ratios and Proportions  
  - Review  
  - Assessment  
  **Lesson 3.5 - Geometric and Scientific Applications**  
  - Lesson 3.5 - Geometric and Scientific Applications  
| 2    |  
  **Lesson 3.6 - Linear Inequalities**  
  **Lesson 3.7 - Absolute Value Equations and Inequalities**  

### Possible Resources

- Lesson 1.1 and 1.2 – [YouTube Video](#)  
- Lesson 1.1 and 1.2 – [Khan Academy](#)  
- Lesson 1.3 and 1.4 – [YouTube Video](#)  
- Lesson 1.3 and 1.4 – [Khan Academy](#)  
- Lesson 1.5 and Topic 5 – [YouTube Video](#)  
- Lesson 1.5 and Topic 5 – [Khan Academy](#)  
- Lesson 2.1 – [YouTube Video](#)  
- Lesson 2.1 – [Khan Academy](#)  
- Lesson 2.2 – [YouTube Video](#)  
- Lesson 2.2 – [Khan Academy](#)  
- Lesson 2.3 – [YouTube Video](#)  
- Lesson 2.3 – [Khan Academy](#)  
- Lesson 2.4 – [YouTube Video](#)  
- Lesson 2.4 – [Khan Academy](#)  
- Lesson 3.1 – [YouTube Video](#)  
- Lesson 3.1 – [Khan Academy](#)  
- Lesson 3.2 – [YouTube Video](#)  
- Lesson 3.2 – [Khan Academy](#)  
- Lesson 3.3 – [YouTube Video](#)  
- Lesson 3.3 – [Khan Academy](#)  
- Lesson 3.4 – [YouTube Video](#)  
- Lesson 3.4 – [Khan Academy](#)  
- Lesson 3.5 – [YouTube Video](#)  
- Lesson 3.5 – [Khan Academy](#)  
- Lessons 3.6 – [YouTube Video](#)  
- Lessons 3.6 – [Khan Academy](#)  
- Lessons 3.7 – [YouTube Video](#)

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<table>
<thead>
<tr>
<th>Week</th>
<th>Date Range</th>
<th>Chapter 4 - Graphs and Functions</th>
<th>Additional Resources</th>
</tr>
</thead>
<tbody>
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<td>9/18 – 9/22</td>
<td>• Review</td>
<td>Lessons 3.7 – Khan Academy</td>
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<tr>
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<td></td>
<td>• Assessment</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>9/25 – 9/29</td>
<td>• Unit 4 – Lesson 4.1 - Ordered Pairs and Graphs</td>
<td>Lesson 4.1 – YouTube Video, Lesson 4.1 – Khan Academy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Lesson 4.2 - Graphs of Equations in Two variables</td>
<td>Lesson 4.2 – Khan Academy, Lesson 4.2 – YouTube Video</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Lesson 4.3 - Relations, Functions, and Graphs</td>
<td>Lesson 4.3 – YouTube Video, Lesson 4.3 – Khan Academy</td>
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<tr>
<td></td>
<td></td>
<td>• Assessment</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>10/2 – 10/6</td>
<td>• Lesson 4.4 - Slope and Graphs of Linear Equations</td>
<td>Lesson 4.4 – Khan Academy, Lesson 4.4 – YouTube Video</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Topic 16 - Graphing Proportional Relationships</td>
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<tr>
<td></td>
<td></td>
<td>• Review</td>
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<tr>
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<td>• Assessment</td>
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<tr>
<td>10</td>
<td>10/9 – 10/13</td>
<td>• Topic 9 - Step and Piecewise functions</td>
<td>Lesson 4.5 – Khan Academy, Lesson 4.5 – YouTube Video</td>
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<tr>
<td></td>
<td></td>
<td>• Lesson 4.5 - Equations of Lines</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>• Topic 11 - Scatterplots and lines of Fit</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Lesson 4.6 - Graphs of linear Inequalities</td>
<td>Lesson 4.6 – Khan Academy, Lesson 4.6 – YouTube Video</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Review</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Assessment</td>
<td></td>
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Quarter 2  
Oct 17 – Dec 21

<table>
<thead>
<tr>
<th>Week</th>
<th>Major Concepts / Topics</th>
<th>Possible Resources</th>
</tr>
</thead>
</table>
| 1 10/17 – 10/20 | **Chapter 5 - Exponents and Polynomials**  
- Unit 5 – Lesson 5.1 - Integer Exponents, and Scientific Notation  
- Lesson 5.2 - Adding and Subtracting Polynomials  
- Lesson 5.1 – YouTube Video  
- Lesson 5.1 – Khan Academy  
- Lesson 5.2 – YouTube Video  
- Lesson 5.2 – Khan Academy |  |
| 2 10/23 – 10/27 | **Chapter 5 - Exponents and Polynomials**  
- Lesson 5.3 - Multiplying Polynomials; Special Products  
- Lesson 5.4 - Dividing Polynomials and Synthetic Division  
- Lesson 5.3 –  YouTube Video  
- Lesson 5.3 –  Khan Academy  
- Lesson 5.4 – YouTube Video  
- Lesson 5.4 – Khan Academy |  |
| 3 10/30 – 11/3 | **Chapter 6 - Factoring and Solving Equations**  
- Unit 6 – Lesson 6.1 - Factoring Polynomials with Common Factors  
- Lesson 6.2 - Factoring Trinomials  
- Lesson 6.1 – YouTube Video  
- Lesson 6.1 – Khan Academy  
- Lesson 6.2 –  YouTube Video  
- Lesson 6.2 – Khan Academy |  |
| 4 11/6 – 11/9 | **Chapter 6 - Factoring and Solving Equations**  
- Lesson 6.3 - More about Factoring Trinomials  
- Lesson 6.4 – YouTube Video  
- Lesson 6.4 – Khan Academy |  |
| 5 11/13 – 11/17 | **Chapter 6 - Factoring and Solving Equations**  
- Lesson 6.5 - Solving Polynomial Equations by Factoring  
- Review  
- Assessment  
- Lesson 6.5 – YouTube Video  
- Lesson 6.5 – Khan Academy |  |
| 6 11/20 – 11/21 | **Chapter 7 - Rational Expressions, Equations, and Functions**  
- Unit 7 – Lesson 7.1 Rational Expressions and Functions  
- Lesson 7.1 - YouTube Video  
- Lesson 7.1 – Khan Academy |  |
| 7 11/27 – 12/1 | **Chapter 7 - Rational Expressions, Equations, and Functions**  
- Lesson 7.2 - Multiplying and Dividing Rational Expressions  
- Lesson 7.3 - Adding and Subtracting Rational Expressions  
- Lesson 7.2 – YouTube Video  
- Lesson 7.2 – Khan Academy  
- Lesson 7.3 – YouTube Video |  |

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### Quarter 3  
Jan 8 – Mar 15

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<thead>
<tr>
<th>Week</th>
<th>Major Concepts / Topics</th>
<th>Possible Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Chapter 7 - Rational Expressions, Equations, and Functions</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Review Lesson 7.1 and 7.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Topic 15 – Graphing Rational Functions</td>
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<tr>
<td></td>
<td>- Lesson 7-6 - Applications and Variation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Assessment</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td><strong>Chapter 8 - Systems of Equations and Inequalities</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Lesson 8.1 - Solving systems of Equations by Graphing and Substitution</td>
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<tr>
<td></td>
<td>- Lesson 8.2 - Solving Systems of Equations by Elimination</td>
<td></td>
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<tr>
<td></td>
<td>- Lesson 8.6 – Systems of linear Inequalities</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td><strong>Chapter 8 - Systems of Equations and Inequalities</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Lesson 8.6 – Systems of linear Inequalities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Assessment</td>
<td></td>
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<tr>
<td></td>
<td><strong>Chapter 9 - Radicals and Complex Numbers</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Lesson 9.1 - Radicals and Rational Exponents</td>
<td></td>
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<tr>
<td>4</td>
<td><strong>Chapter 9 - Radicals and Complex Numbers</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Lesson 9.1 - Radicals and Rational Exponents</td>
<td></td>
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<tr>
<td></td>
<td>- Lesson 9.2 – Simplifying Radical Expressions</td>
<td></td>
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<tr>
<td></td>
<td>- Topic 19 - The Distance Formula</td>
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<tr>
<td>5</td>
<td><strong>Chapter 9 - Radicals and Complex Numbers</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Lesson 9.3 – Adding and Subtracting Radical Expressions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Review</td>
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<tr>
<td></td>
<td>- Assessment</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td><strong>Chapter 9 - Radicals and Complex Numbers</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Lesson 9.4 Multiplying and Dividing Radical Expressions</td>
<td></td>
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<tr>
<td></td>
<td>- Topic 18 - Graphing Square and Cube Root Functions</td>
<td></td>
</tr>
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<tr>
<th>Week</th>
<th>Topics</th>
</tr>
</thead>
</table>
| 7    | 2/20 – 2/23  
Lesson 9.5 – Radical Equations and Applications  
Lesson 9.6 - Complex Numbers  
Review  
Assessment |
| 8    | 2/26 – 3/2  
Unit 10 – Lesson 10.1 - Solving Quadratic Equations  
Lesson 10.2 - Completing the Square  
Lesson 10.3 – Quadratic Formula |
| 9    | 3/5 – 3/9  
Chapter 10 - Quadratic Equations, Functions, and Inequalities  
Lesson 10.4 – Graphs of Quadratic Functions  
Topic 8 – Symmetry and Behavior of Graphs  
Lesson 10.5 – Applications of Quadratic Equations |
| 10   | 3/12 – 3/15  
Review  
Assessment  
Lesson 10.6 - Quadratic and Rational Inequalities |

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### Math for College Readiness

#### Quarter 4
Mar 19 – May 24

<table>
<thead>
<tr>
<th>Week</th>
<th>Major Concepts / Topics</th>
<th>Possible Resources</th>
</tr>
</thead>
</table>
| 1    | **Chapter 11 - Quadratic Equations, Functions, and Inequalities**  
     - Lesson 11.1 - Exponential Functions  
     - Lesson 11.2 - Composite and Inverse Functions  
     - Assessment | Lesson 11.1 – [YouTube Video](#)  
Lesson 11.1 – [Khan Academy](#)  
Lesson 11.2 – [YouTube Video](#)  
Lesson 11.2 – [Khan Academy](#) |
| 2    | **SPRING BREAK – NO SCHOOL** |                     |
| 3    | **Chapter 11 - Quadratic Equations, Functions, and Inequalities**  
     - Review 11.1, 11.2 Exponential Functions and Composite and Inverse Functions  
     - Lesson 11.3 - Logarithmic Functions  
     - Lesson 11.4 - Properties of Logarithms | Lesson 11.3 – [YouTube Video](#)  
Lesson 11.3 – [Khan Academy](#)  
Lesson 11.4 – [YouTube Video](#)  
Lesson 11.4 – [Khan Academy](#) |
| 4    | **Chapter 11 - Quadratic Equations, Functions, and Inequalities**  
     - Lesson 11.5 - Solving Exponential and Logarithmic Equations  
     - Lesson 11.6 - Applications  
     - Topic 21 - Two-way tables  
     - Review  
     - Chapter 11 Assessment | Lesson 11.5 – [YouTube Video](#)  
Lesson 11.5 – [Khan Academy](#)  
Lesson 11.6 – [Khan Academy](#)  
Topic 21 - [YouTube Video](#) |
| 5    | **Chapter 12 - Conics**  
     - Unit 12 – Lesson 12.1 - Circles and Parabolas  
     - Lesson 12.2 – Ellipses | Lesson 12.1 – [YouTube Video](#)  
Lesson 12.1 – [Khan Academy](#)  
Lesson 12.2 – [YouTube Video](#)  
Lesson 12.2 – [Khan Academy](#) |
| 6    | **Chapter 12 - Conics**  
     - Lesson 12.2 – Ellipses  
     - Lesson 12.3 – Hyperbolas  
     - Lesson 12.4 - Solving non-linear systems of equations | Lesson 12.3 – [YouTube Video](#)  
Lesson 12.3 – [Khan Academy](#) |

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<tr>
<th>#</th>
<th>Date Range</th>
<th>Chapter 12 - Conics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>4/30 – 5/4</td>
<td>Lesson 12.4 - Solving non-linear systems of equations</td>
<td>Review</td>
</tr>
<tr>
<td>8</td>
<td>5/7 – 5/11</td>
<td></td>
<td>Assessment</td>
</tr>
<tr>
<td>9</td>
<td>5/14 – 5/18</td>
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<tr>
<td>10</td>
<td>5/21 – 5/24</td>
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<td>Exam Review/ Finals</td>
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</table>

Lesson 12.4 - [YouTube Video](#)  
Lesson 12.4 – [Khan Academy](#)