

## Beginning Algebra Part II OER Instructors' Guide

<b>Class</b>	<b>MOM Section</b>	<b>Topic</b>	<b>Objectives</b>	<b>Teaching Notes</b> Teach <b>Workbook</b> examples and give in-class practice problems to students using workbook exercises (instructor can always modify number of exercises if necessary, based on level of class)	<b>Suggested Homework</b>
1.	<b>6.1</b>	<b>Factoring-Greatest Common Factor</b>	Find the Greatest Common Factor of a list of numbers & variable terms.	Teach: Workbook examples A, C, D, E,F <ul style="list-style-type: none"> <li>● In-class problems for students:</li> </ul> Worksheet: 7, 9, 11, 13, 15	Myopenmath <ul style="list-style-type: none"> <li>● Video problems</li> <li>● Practice problems</li> </ul>
2.	<b>6.2</b>	<b>Factoring-Grouping</b>	Factor polynomials with four terms using grouping.	Teach: Workbook examples A, B,C <ul style="list-style-type: none"> <li>● In-class problems for students:</li> </ul> Worksheet: 1, 3, 5	Myopenmath <ul style="list-style-type: none"> <li>● Video problems</li> <li>● Practice problems</li> </ul>
3.	<b>6.3</b>	<b>Factoring-Trinomials where <math>a=1</math></b>	Factor trinomials with coefficient $a=1$  Factor trinomials after factoring out the GCF.	Teach: Workbook examples A, B,C, D <ul style="list-style-type: none"> <li>● In-class problems for students:</li> </ul> Worksheet: 1, 3, 5, 7	Myopenmath <ul style="list-style-type: none"> <li>● Video problems</li> <li>● Practice problems</li> </ul>
4.	<b>6.4</b>	<b>Factoring-Trinomials where <math>a \neq 1</math></b>	Factor trinomials with coefficient $a \neq 1$  Factor trinomials after factoring out the GCF	Teach: Workbook examples A, B, C <ul style="list-style-type: none"> <li>● In-class problems for students:</li> </ul> Worksheet: 1, 3, 5, 7 Workbook examples D,E <ul style="list-style-type: none"> <li>● In-class problems for students:</li> </ul> Worksheet: 19, 20	Myopenmath <ul style="list-style-type: none"> <li>● Video problems</li> <li>● Practice problems</li> </ul>
5.	<b>6.5</b>	<b>Factoring Special Products</b>	Identify and factor special products including a difference	Teach: Workbook examples A, B, C, D, E (Factoring the Difference of Two squares)	Myopenmath <ul style="list-style-type: none"> <li>● Video problems</li> </ul>

			of squares, perfect squares, and sum and difference of cubes. Factor trinomials after factoring out the GCF.	<ul style="list-style-type: none"> <li>In-class problems for students: Worksheet: 1, 3, 5</li> </ul> Workbook examples A, B, C (Perfect squares) <ul style="list-style-type: none"> <li>In-class problems for students: Worksheet: 7, 8, 10</li> </ul> Workbook examples A, B, C, D (Factor a Sum/difference of cubes) <ul style="list-style-type: none"> <li>In-class problems for students: Worksheet: 14, 15, 16</li> </ul>	<ul style="list-style-type: none"> <li>Practice problems</li> </ul>
6.	<b>6.6</b>	<b>Factoring Strategy</b>	Identify and use the correct method to factor various polynomials	Teach: Workbook examples A, B, C, D <ul style="list-style-type: none"> <li>In-class problems for students: Worksheet: 1, 3, 5, 20, 21</li> </ul>	Myopenmath <ul style="list-style-type: none"> <li>Video problems</li> <li>Practice problems</li> </ul>
7.	<b>6.7</b>	<b>Solve by Factoring</b>	Solve quadratic equation by factoring and using the zero-product rule.	Teach: Workbook examples A, B, C, D <ul style="list-style-type: none"> <li>In-class problems for students: Worksheet: 1, 3, 5, 7, 9, 11</li> </ul>	Myopenmath <ul style="list-style-type: none"> <li>Video problems</li> <li>Practice problems</li> </ul>
8.	<b>7.1</b>	<b>Reduce Rational Expressions</b>	Reduce rational expressions by removing common factors. Determine domain. Evaluate rationals	Teach: Workbook examples A, B, C, D <ul style="list-style-type: none"> <li>In-class problems for students: Worksheet: 1, 3, 5, 7, 14, 20</li> </ul>	Myopenmath <ul style="list-style-type: none"> <li>Video problems</li> <li>Practice problems</li> </ul>
9.	<b>7.2</b>	<b>Multiply and Divide Rational Expressions</b>	Combine rational expressions with multiplication and division	Teach: Workbook examples A, B, C, D <ul style="list-style-type: none"> <li>In-class problems for students: Worksheet: 1, 2, 5, 10, 20</li> </ul>	Myopenmath <ul style="list-style-type: none"> <li>Video problems</li> <li>Practice problems</li> </ul>
10.	<b>7.3</b>	<b>Least Common Denominator</b>	Find the LCD by factoring	Teach: Workbook examples A, B, C, D <ul style="list-style-type: none"> <li>In-class problems for students: Worksheet: 1, 3, 5, 8, 14, 16, 19</li> </ul>	Myopenmath <ul style="list-style-type: none"> <li>Video problems</li> <li>Practice problems</li> </ul>

11.	7.4	<b>Add and Subtract Rational Expressions</b>	Combine rational expressions using the LCD for addition and subtraction	Teach: Workbook examples A, B, C, D <ul style="list-style-type: none"> <li>In-class problems for students:</li> </ul> Worksheet: 1, 3, 5, 7, 9, 11	Myopenmath <ul style="list-style-type: none"> <li>Video problems</li> <li>Practice problems</li> </ul>
12.	7.5	<b>Complex Fractions</b>	Simplify complex fractions by multiplying by the LCD to every term	Teach: Workbook examples A, B, C, D <ul style="list-style-type: none"> <li>In-class problems for students:</li> </ul> Worksheet: 1, 3, 5, 7, 9, 11	Myopenmath <ul style="list-style-type: none"> <li>Video problems</li> <li>Practice problems</li> </ul>
13.	7.7	<b>Solving Rational Equations</b>	Solve rational equations by multiplying by the LCD	Teach: Workbook examples A, B, C, D <ul style="list-style-type: none"> <li>In-class problems for students:</li> </ul> Worksheet: 1, 4, 7, 13, 17, 21	Myopenmath <ul style="list-style-type: none"> <li>Video problems</li> <li>Practice problems</li> </ul>
14.	8.1, 8.2	<b>Square Roots and Higher Roots</b>	Simplify radical expressions	Teach: Workbook examples A-F <ul style="list-style-type: none"> <li>In-class problems for students:</li> </ul> Worksheet: 2, 3, 4, 5 Workbook examples G, H <ul style="list-style-type: none"> <li>In-class problems for students:</li> </ul> Worksheet: 7, 8, 9	Myopenmath <ul style="list-style-type: none"> <li>Video problems</li> <li>Practice problems</li> </ul>
15.	8.3	<b>Adding Radicals</b>	Add and Subtract radical expressions with and without variables	Teach: Workbook examples B, D, E <ul style="list-style-type: none"> <li>In-class problems for students:</li> </ul> Worksheet: 1, 3 Workbook examples F, G, H <ul style="list-style-type: none"> <li>In-class problems for students:</li> </ul> Worksheet: 4, 6, 8, 11	Myopenmath <ul style="list-style-type: none"> <li>Video problems</li> <li>Practice problems</li> </ul>
16.	8.4	<b>Multiplying Radicals</b>	Multiply radical expressions with and without variables	Teach: Workbook examples A, B, C <ul style="list-style-type: none"> <li>In-class problems for students:</li> </ul> Worksheet: 2, 4, 5, 7 Workbook examples F, G, H <ul style="list-style-type: none"> <li>In-class problems for students:</li> </ul>	Myopenmath <ul style="list-style-type: none"> <li>Video problems</li> <li>Practice problems</li> </ul>

				Worksheet: 8, 9, 11, 13	
17.	8.5	<b>Dividing Radicals, Rationalizing Denominator</b>	<p>Divide radical expressions with and without variables</p> <p>Divide by monomial (one term)</p> <p>Divide by binomial (two terms)</p> <p>Rationalize denominator</p>	<p>Teach:</p> <p>Workbook examples A, C, D (Simplify radicals)</p> <ul style="list-style-type: none"> <li>In-class problems for students:</li> </ul> <p>Worksheet: 2, 3, 5</p> <p>Workbook examples E, F (Rationalize denominator -monomial)</p> <ul style="list-style-type: none"> <li>In-class problems for students:</li> </ul> <p>Worksheet: 7, 8, 9</p> <p>Workbook examples G (Rationalize denominator -binomial)</p> <ul style="list-style-type: none"> <li>In-class problems for students:</li> </ul> <p>Worksheet: 10, 12, 14</p>	<p>Myopenmath</p> <ul style="list-style-type: none"> <li>Video problems</li> <li>Practice problems</li> </ul>
18.	9.1	<b>Quadratics - Solving with Radicals</b>	Solve equations with radicals and check for extraneous solutions.	<p>Teach:</p> <p>Workbook examples A, D,E,F</p> <ul style="list-style-type: none"> <li>In-class problems for students:</li> </ul> <p>Worksheet: 1,3,5,15</p>	<p>Myopenmath</p> <ul style="list-style-type: none"> <li>Video problems</li> <li>Practice problems</li> </ul>
19.	9.2	<b>Solving with Exponents using the Square Root Property</b>	<p>Solve quadratic equations of the form <math>x^2 = k</math> using the Square Root Property</p> <p>Solve quadratic equations of the form <math>a(x-h)^2=k</math> using the Square Root Property</p>	<p>Teach:</p> <p>Workbook examples A, B, C, D</p> <ul style="list-style-type: none"> <li>In-class problems for students:</li> </ul> <p>Worksheet: 1, 2</p> <p>Workbook examples D, E</p> <ul style="list-style-type: none"> <li>In-class problems for students:</li> </ul> <p>Worksheet: 3, 6, 8, 9</p>	<p>Myopenmath</p> <ul style="list-style-type: none"> <li>Video problems</li> <li>Practice problems</li> </ul>
20.	9.3	<b>Completing the Square</b>	Solve quadratic equations of the form $ax^2 + bx + c = 0$ by completing the square	<p>Teach:</p> <p>Workbook examples A, B, C</p> <ul style="list-style-type: none"> <li>In-class problems for students:</li> </ul> <p>Worksheet: 3, 4, 5</p>	<p>Myopenmath</p> <ul style="list-style-type: none"> <li>Video problems</li> <li>Practice problems</li> </ul>
21.	9.4	<b>Quadratic Formula</b>	Solve quadratic equations by using the quadratic formula	<p>Teach:</p> <p>Workbook examples A, D, E</p> <ul style="list-style-type: none"> <li>In-class problems for students:</li> </ul> <p>Worksheet: 1, 5, 8, 10</p>	<p>Myopenmath</p> <ul style="list-style-type: none"> <li>Video problems</li> <li>Practice problems</li> </ul>

