

Beginning Algebra II OER Instructors' Guide

Class	MOM Section	Topic	Objectives	Teaching Notes Teach Workbook 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)	Suggested Homework
1.	6.1	Factoring-Greatest Common Factor	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"> In-class problems for students: Worksheet: 7, 9, 11, 13, 15	Myopenmath <ul style="list-style-type: none"> Video problems Practice problems
2.	6.2	Factoring-Grouping	Factor polynomials with four terms using grouping.	Teach: Workbook examples A, B,C <ul style="list-style-type: none"> In-class problems for students: Worksheet: 1, 3, 5	Myopenmath <ul style="list-style-type: none"> Video problems Practice problems
3.	6.3	Factoring-Trinomials where $a=1$	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"> In-class problems for students: Worksheet: 1, 3, 5, 7	Myopenmath <ul style="list-style-type: none"> Video problems Practice problems
4.	6.4	Factoring-Trinomials where $a \neq 1$	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"> In-class problems for students: Worksheet: 1, 3, 5, 7 Workbook examples D,E <ul style="list-style-type: none"> In-class problems for students: Worksheet: 19, 20	Myopenmath <ul style="list-style-type: none"> Video problems Practice problems
5.	6.5	Factoring Special Products	Identify and factor special products including a difference of squares, perfect	Teach: Workbook examples A, B, C, D, E (Factoring the Difference of Two squares) <ul style="list-style-type: none"> In-class problems for students: 	Myopenmath <ul style="list-style-type: none"> Video problems

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

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

				Worksheet: 8, 9, 11, 13	
17.	8.5	Dividing Radicals, Rationalizing Denominator	<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"> In-class problems for students: <p>Worksheet: 2, 3, 5</p> <p>Workbook examples E, F (Rationalize denominator -monomial)</p> <ul style="list-style-type: none"> In-class problems for students: <p>Worksheet: 7, 8, 9</p> <p>Workbook examples G (Rationalize denominator -binomial)</p> <ul style="list-style-type: none"> In-class problems for students: <p>Worksheet: 10, 12, 14</p>	<p>Myopenmath</p> <ul style="list-style-type: none"> Video problems Practice problems
18.	9.1	Quadratics - Solving with Radicals	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"> In-class problems for students: <p>Worksheet: 1,3,5,15</p>	<p>Myopenmath</p> <ul style="list-style-type: none"> Video problems Practice problems
19.	9.2	Solving with Exponents using the Square Root Property	<p>Solve quadratic equations of the form $x^2 = k$ using the Square Root Property</p> <p>Solve quadratic equations of the form $a(x-h)^2=k$ using the Square Root Property</p>	<p>Teach:</p> <p>Workbook examples A, B, C, D</p> <ul style="list-style-type: none"> In-class problems for students: <p>Worksheet: 1, 2</p> <p>Workbook examples D, E</p> <ul style="list-style-type: none"> In-class problems for students: <p>Worksheet: 3, 6, 8, 9</p>	<p>Myopenmath</p> <ul style="list-style-type: none"> Video problems Practice problems
20.	9.3	Completing the Square	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"> In-class problems for students: <p>Worksheet: 3, 4, 5</p>	<p>Myopenmath</p> <ul style="list-style-type: none"> Video problems Practice problems
21.	9.4	Quadratic Formula	Solve quadratic equations by using the quadratic formula	<p>Teach:</p> <p>Workbook examples A, D, E</p> <ul style="list-style-type: none"> In-class problems for students: <p>Worksheet: 1, 5, 8, 10</p>	<p>Myopenmath</p> <ul style="list-style-type: none"> Video problems Practice problems

