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| **Beginning Algebra 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. | 0.1 | [**Integers**](http://www.wallace.ccfaculty.org/book/0.1%20Integers.pdf) | Add, subtract, multiply and divide positive and negative numbers | **Teach**:  Workbook examples A, B   * In-class problems for students: Worksheet: 1-7   Workbook examples C-F   * In-class problems for students: Worksheet: 8-18 even   Workbook examples G, H   * In-class problems for students: Worksheet: 19-24 | Myopenmath   * Practice problems |
| 2. | 0.2 | [**Fractions**](http://www.wallace.ccfaculty.org/book/0.2%20Fractions.pdf) | Reduce, add, subtract, multiply, and divide with fractions | **Teach:**  Workbook examples A- C   * In-class problems for students: Worksheet: 1-7 odd   Workbook examples D-G   * In-class problems for students: Worksheet: 9-17  odd   Workbook examples H-K   * In-class problems for students: Worksheet: 19-25  odd | Myopenmath   * Practice problems |
| 3. | 0.3 | [**Order of Operations**](http://www.wallace.ccfaculty.org/book/0.3%20Order%20of%20Operations.pdf) | Evaluate expressions using the order of operations | **Teach:**  Workbook examples A-C   * In-class problems for students: Worksheet: 1-6   Workbook examples D-E   * In-class problems for students: Worksheet: 7-15  odd | Myopenmath   * Video problems * Practice problems |
| 4. | 0.4 | [**Properties of Algebra**](http://www.wallace.ccfaculty.org/book/0.4%20Properties%20of%20Algebra.pdf) | Simplify algebraic expressions by substituting given values, distributing, and combining like terms | **Teach:**  Workbook examples A -E  Worksheet #6   * In-class problems for students:   Worksheet: 1, 3, 5, 10 13 & 18  Workbook examples F  Worksheet # 28, 30   * In-class problems for students:   Worksheet: 19-31 odd | Myopenmath   * Video problems * Practice problems |
| 5. | 1.1 | [**One-Step Equations**](http://www.wallace.ccfaculty.org/book/1.1%20One-Step%20Equations.pdf) | Solve one step linear equations by balancing using inverse operations | **Teach:**  Workbook examples A- F   * In-class problems for students:   Worksheet: 1- 15 odd | Myopenmath   * Video problems * Practice problems |
| 6. | 1.2 | [**Two-Step Equations**](http://www.wallace.ccfaculty.org/book/1.2%20Two-Step%20Equations.pdf) | Solve two-step equations by balancing and using inverse operations | **Teach:**  Workbook examples A- C and worksheet #8 & 10   * In-class problems for students:   Worksheet: 1-9 odd  Workbook examples D  Worksheet #12, 14   * In-class problems for students:   Worksheet: 11, 13, 15 | Myopenmath   * Video problems * Practice problems |
| 7. | 1.3 | [**General Linear Equations**](http://www.wallace.ccfaculty.org/book/1.3%20General%20Linear%20Equations.pdf) | Solve general linear equations with variables on both sides  Use the solution of an equation to classify the equation as either a conditional equation, an identity, or a contradiction | **Teach:**  Workbook examples A, B   * In-class problems for students: Worksheet: 1-7   Workbook examples C, D   * In-class problems for students: Worksheet: 8-10 | Myopenmath   * Video problems * Practice problems |
| 8. | 1.4 | [**Solving with Fractions**](http://www.wallace.ccfaculty.org/book/1.4%20Fractions.pdf) | Solve linear equations with rational coefficients by multiplying by the least common denominator to clear the fractions | **Teach:**  Workbook examples A, B, C   * In-class problems for students: Worksheet: 1, 2, 4, 7, 9-11   Workbook example D   * In-class problems for students: Worksheet: 3, 5, 6, 8 | Myopenmath   * Video problems * Practice problems |
| 9. | 1.5 | [**Formulas**](http://www.wallace.ccfaculty.org/book/1.5%20Formulas.pdf) | Solve linear formulas for a specific variable | **Teach:**  Workbook examples A-D, F   * In-class problems for students: Worksheet: 1-9, 11   Workbook example E   * In-class problems for students: Worksheet: 10, 12 | Myopenmath   * Video problems * Practice problems |
| 10. | 1.8 | [**Application: Number/Geometry**](http://www.wallace.ccfaculty.org/book/1.8%20Number%20and%20Geometry.pdf) | Solve number and geometry problems by creating and solving a linear equation | **Teach:**  Workbook examples A- C &  worksheet #8 & 10   * In-class problems for students:   Worksheet: 1- 11 odd  Workbook examples D-F   * In-class problems for students:   Worksheet: 1, 3, 5, and 9 | Myopenmath   * Video problems * Practice problems |
| 11. | 1.9 | **Other Applications** | Set up a linear equation to solve age, commission, sales tax, and discount problems | **Teach:**  Workbook examples A  worksheet # 2   * In-class problems for students:   Worksheet: 1  Workbook examples B-C  worksheet # 4   * In-class problems for students:   Worksheet: 3, 5  Workbook examples D-E  worksheet # 10, 12   * In-class problems for students:   Worksheet: 7, 9, 11 | Myopenmath   * Video problems * Practice problems |
| 12. | 3.1 | [**Solve and Graph Inequalities**](http://www.wallace.ccfaculty.org/book/3.1%20Simple%20Inequalities.pdf) | Solve, graph, and give interval notation for the solution to linear inequalities | **Teach:**  Workbook examples A-C   * In-class problems for students:   Worksheet: 1,3,7,9  Workbook examples D, F  Worksheet # 16   * In-class problems for students:   Worksheet: 11, 13, 15, 17 | Myopenmath   * Video problems * Practice problems |
| 13. | 2.1 | [**Points and Lines**](http://www.wallace.ccfaculty.org/book/2.1%20Points%20and%20Lines.pdf) | Graph points and linear equations by finding and plotting ordered pair solutions using xy coordinates. | Teach:  Workbook example A   * In-class problems for students:   Worksheet: 1, 4, 7, 10, 13, 18, 19, 21  Workbook example B, C   * In-class problems for students: Worksheet: 1-9 odd | Myopenmath   * Video problems * Practice problems |
| 14. | 2.2 | [**Slope**](http://www.wallace.ccfaculty.org/book/2.2%20Slope.pdf) | Find the slope of a line given a graph or two points | Teach:  Workbook example A   * In-class problems for students:   Worksheet: 1, 2  Workbook example B   * In-class problems for students: Worksheet: 4, 5, 6   Workbook example C   * In-class problems for students: Worksheet: 10-14 | Myopenmath   * Video problems * Practice problems |
| 15. | 2.3 | [**Slope-Intercept Form**](http://www.wallace.ccfaculty.org/book/2.3%20Slope%20Intercept.pdf) | Write the equation of a line using slope intercept form | **Teach:**  Workbook example A   * In-class problems for students: Worksheet: 1, 2   Workbook examples B, C   * In-class problems for students: Worksheet: 4, 5, 6, 7, 8   Workbook example D   * In-class problems for students: Worksheet: 11-14 | Myopenmath   * Video problems * Practice problems |
| 16. | 2.4 | [**Point-Slope Form**](http://www.wallace.ccfaculty.org/book/2.3%20Slope%20Intercept.pdf) | Give the equation of a line with a known slope and point | **Teach:**  Workbook example A   * In-class problems for students: Worksheet: 1-5 odd   Workbook examples B, C, D   * In-class problems for students: Worksheet: 6-10 even | Myopenmath   * Video problems * Practice problems |
| 17. | 2.5 | **Parallel & Perpendicular Lines** | Write an equation of a line given a parallel or perpendicular line | **Teach:**  Workbook example A, B   * In-class problems for students: Worksheet: 1-9 odd   Workbook examples C, D, E   * In-class problems for students: Worksheet: 13-21 odd | Myopenmath   * Video problems * Practice problems |
| 18. | 4.1 | [**Graphing**](http://www.wallace.ccfaculty.org/book/4.1%20Graphing%20Systems.pdf) | Solve systems of equations by graphing and identifying the point of intersection | **Teach:**  Workbook example A, B   * In-class problems for students: Worksheet: 1-3   Workbook examples C-F   * In-class problems for students: Worksheet: 4, 6, 8 | Myopenmath   * Video problems * Practice problems |
| 29. | 4.2 | [**Substitution**](http://www.wallace.ccfaculty.org/book/4.2%20Substitution.pdf) | Solve systems of equations using substitution | **Teach:**  Workbook example A, B   * In-class problems for students: Worksheet: 1, 3, 4   Workbook examples C   * In-class problems for students: Worksheet: 5, 6 | Myopenmath   * Video problems * Practice problems |
| 20. | 4.3 | [**Addition/Elimination**](http://www.wallace.ccfaculty.org/book/4.3%20Elimination.pdf) | Solve systems of equations using the addition/elimination method | **Teach:**  Workbook example A   * In-class problems for students: Worksheet: 1, 2   Workbook examples B, C, D   * In-class problems for students: Worksheet: 3, 4, 5, 7 | Myopenmath   * Video problems * Practice problems |
| 21. | 4.5 | [**Application: Value Problems**](http://www.wallace.ccfaculty.org/book/4.6%20%20Mixture.pdf) | Solve value problems by setting up a system of equations | **Teach:**  Workbook examples A, B   * In-class problems for students: Worksheet: 1, 2, 3, 5 | Myopenmath   * Video problems * Practice problems |
| 22. | 4.6 | [**Application: Mixture Problems**](http://www.wallace.ccfaculty.org/book/4.6%20%20Mixture.pdf) | Solve mixture problems by setting up a system of equations | **Teach:**  Workbook examples A, B   * In-class problems for students: Worksheet: 1, 2, 3, 4 | Myopenmath   * Video problems * Practice problems |
| 23. | 5.1 | [**Exponent Properties**](http://www.wallace.ccfaculty.org/book/5.1%20Exponents.pdf) | Simplify expressions using the properties of exponents | **Teach**:  Workbook examples A-D   * In-class problems for students:   Worksheet: 1, 3, 5  Workbook examples E-G   * In-class problems for students:   Worksheet: 7,9,11  Workbook examples H-K   * In-class problems for students:   Worksheet: 13, 15, 17, 20  Workbook examples L,M,O,P   * In-class problems for students:   Worksheet: 21,23,24,25 | Myopenmath   * Video problems * Practice problems |
| 24. | 5.2 | [**Negative Exponents**](http://www.wallace.ccfaculty.org/book/5.2%20Negative%20Exponents.pdf) | Simplify expressions with negative exponents using the properties of exponents | **Teach:**  Workbook examples A-F   * In-class problems for students: Worksheet: 1-7   Workbook examples G, H   * In-class problems for students: Worksheet: 8-15 | Myopenmath   * Video problems * Practice problems |
| 25. | 5.3 | [**Scientific Notation**](http://www.wallace.ccfaculty.org/book/5.3%20Scientific%20Notation.pdf) | Multiply and divide expressions using scientific notation and exponent properties | **Teach:**  Workbook example A, B, E, F   * In-class problems for students: Worksheet: 1-11 odd   Workbook examples I, J   * In-class problems for students: Worksheet: 13, 15 | Myopenmath   * Video problems * Practice problems |
| 26. | 5.4 | [**Introduction to Polynomials**](http://www.wallace.ccfaculty.org/book/5.4%20Add%20Polynomials.pdf) | Evaluate, add, and subtract polynomials | **Teach:**  Workbook example A, B, C   * In-class problems for students: Worksheet: 1, 2   Workbook examples D, E   * In-class problems for students: Worksheet: 3, 4, 6, 7, 8 | Myopenmath   * Video problems * Practice problems |
| 27. | 5.5 | [**Multiply Polynomials**](http://www.wallace.ccfaculty.org/book/5.5%20Multiply%20Polynomials.pdf) | Multiply polynomials | **Teach:**  Workbook example A   * In-class problems for students:   Worksheet: 1, 3  Workbook examples B, C   * In-class problems for students: Worksheet 5, 7, 8   Workbook examples E   * In-class problems for students: Worksheet: 9, 11, 13, 14, 16 | Myopenmath   * Video problems * Practice problems |
| 28. | 5.6 | [**Multiply Special Products**](http://www.wallace.ccfaculty.org/book/5.6%20Multiply%20Special%20Products.pdf) | Recognize and use special product rules of a sum and difference and perfect squares to multiply polynomials | **Teach:**  Workbook examples A, C   * In-class problems for students:   Worksheet: 1-7 odd  Workbook examples D, F, G   * In-class problems for students: Worksheet 9-17 odd | Myopenmath   * Video problems * Practice problems |
| 29. | 5.7 | [**Divide Polynomials**](http://www.wallace.ccfaculty.org/book/5.7%20Divide%20Polynomials.pdf) | Divide polynomials using long division | **Teach:**  Workbook examples A, C, E   * In-class problems for students:   Worksheet: 1, 4, 5  Workbook examples F, G, H   * In-class problems for students:   Worksheet: 7, 9, 11, 13 | Myopenmath   * Video problems * Practice problems |