1. Record Nr. UNINA9910797828303321 Autore Muschla Judith A. Titolo Algebra teacher's activities kit: 150 activities that support algebra in the common core math standards, grades 6-12 / / Judith A. Muschla, Gary Robert Muschla, and Erin Muschla-Berry San Francisco, CA:,: John Wiley & Sons Incorporated,, [2016] Pubbl/distr/stampa ©2016 **ISBN** 1-119-04559-2 1-119-04560-6 Edizione [Second edition.] Descrizione fisica 1 online resource (333 pages): illustrations Collana J-B Ed: Activities Classificazione EDU029010 Disciplina 512.9071/2073 Algebra - Study and teaching (Secondary) - Activity programs Soggetti Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Includes index. Nota di contenuto Cover -- Title Page -- Copyright -- Contents -- About the Authors --

Acknowledgments -- Preface -- Section 1:Ratios and Proportional Relationships -- Teaching Notes for the Activities of Section 1 -- 1-1: (6.RP.1) Understanding Ratios -- 1-2: (6.RP.2) Unit Rates and Ratios --1-3: (6.RP.3) Equivalent Ratios and the Coordinate Plane -- 1-4: (6.RP. 3) Finding the Percent of a Number and Finding the Whole -- 1-5: (7. RP.1) Finding Unit Rates -- 1-6: (7.RP.2) Graphing Proportional Relationships -- 1-7: (7.RP.2) Representing Proportional Relationships -- 1-8: (7.RP.3) Solving Word Problems Involving Percents --Reproducibles for Section 1 -- Section 2:The Number System and Number and Quantity -- Teaching Notes for the Activities of Section 2 -- 2-1: (6.NS.5) Representing Positive and Negative Numbers -- 2-2: (6.NS.6) Graphing Rational Numbers on a Number Line -- 2-3: (6.NS.6) Graphing Points in the Coordinate Plane -- 2-4: (6.NS.7) The Absolute Value and Order of Rational Numbers -- 2-5: (6.NS.8) Using the Coordinate Plane to Solve Problems -- 2-6: (7.NS.1) Using the Number Line to Add and Subtract Rational Numbers -- 2-7: (7.NS.1) Using Properties to Add and Subtract Rational Numbers -- 2-8: (7.NS.2) Multiplying and Dividing Rational Numbers -- 2-9: (7.NS.2) Converting Rational Numbers to Decimals -- 2-10: (7.NS.3) Solving Word Problems Involving Rational Numbers -- 2-11: (8.NS.1) Expressing Fractions as

Repeating Decimals and Repeating Decimals as Fractions -- 2-12: (8. NS.2) Using Rational Approximations of Irrational Numbers -- 2-13: (N-RN.1) Using the Properties of Exponents -- 2-14: (N-RN.2) Rewriting Expressions Involving Radicals and Rational Exponents -- 2-15: (N-RN.3) Sums and Products of Rational and Irrational Numbers --2-16: (N-Q.1) Interpreting and Using Units -- 2-17: (N-Q.2) Defining Appropriate Quantities. 2-18: (N-Q.3) Choosing Appropriate Levels of Accuracy for Measurement -- 2-19: (N-CN.1) Writing Complex Numbers -- 2-20: (N-CN.2) Adding, Subtracting, and Multiplying Complex Numbers -- 2-21: (N-CN.7) Solving Quadratic Equations That Have Complex Solutions -- Reproducibles for Section 2 -- Section 3:Basic Expressions, Equations, and Inequalities -- Teaching Notes for the Activities of Section 3 -- 3-1: (6.EE.1) Writing and Evaluating Numerical Expressions with Whole-Number Exponents -- 3-2: (6.EE.2) Writing and Reading Algebraic Expressions -- 3-3: (6.EE.2) Evaluating Algebraic Expressions -- 3-4: (6.EE.3) Applying Properties of Operations to Generate Equivalent Expressions -- 3-5: (6.EE.4) Identifying Equivalent Expressions -- 3-6: (6.EE.5) Identifying Solutions of Equations and Inequalities -- 3-7: (6.EE.6) Writing Expressions in Which Variables Represent Numbers -- 3-8: (6.EE.7) Writing and Solving Equations --3-9: (6.EE.8) Using Inequalities -- 3-10: (6.EE.9) Using Variables to Represent Two Quantities -- 3-11: (7.EE.1) Adding, Subtracting, Factoring, and Expanding Linear Expressions -- 3-12: (7.EE.2) Rewriting Expressions in Different Forms -- 3-13: (7.EE.3) Solving Multi-Step Problems -- 3-14: (7.EE.4) Solving Equations and Inequalities -- 3-15: (8.EE.1) Applying Properties of Integer Exponents -- 3-16: (8.EE.2) Using Square Roots and Cube Roots -- 3-17: (8.EE.3) Using Numbers Expressed in Scientific Notation -- 3-18: (8.EE.4) Operations with Scientific Notation -- 3-19: (8.EE.5) Graphing Proportional Relationships -- 3-20: (8.EE.6) Deriving the Equation y = mx -- 3-21: (8.EE.7) Identifying Equations That Have One Solution, No Solutions, or Infinitely Many Solutions -- 3-22: (8.EE.7) Solving Equations with Variables on Both Sides -- 3-23: (8.EE.8) Solving Systems of Linear Equations Algebraically. 3-24: (8.EE.8) Solving Systems of Equations by Graphing --Reproducibles for Section 3 -- Section 4:Polynomial, Rational, Exponential, and Radical Expressions, Equations, and Inequalities --Teaching Notes for the Activities of Section 4 -- 4-1: (A-SSE.1) Interpreting Expressions -- 4-2: (A-SSE.2) Using the Structure of an Expression to Identify Ways to Rewrite It -- 4-3: (A-SSE.3) Factoring Quadratic Expressions to Reveal Zeroes -- 4-4: (A-SSE.3) Completing the Square to Reveal Maximum or Minimum Values -- 4-5: (A-SSE.4) Finding Sums of Finite Geometric Series -- 4-6: (A-APR.1) Adding, Subtracting, and Multiplying Polynomials -- 4-7: (A-APR.2) Applying the Remainder Theorem -- 4-8: (A-APR.3) Using Zeroes to Construct a Rough Graph of a Polynomial Function -- 4-9: (A-APR.4) Proving Polynomial Identities -- 4-10: (A-APR.6) Rewriting Rational Expressions -- 4-11: (A-CED.1) Writing and Solving Equations and Inequalities in One Variable -- 4-12: (A-CED.2) Writing and Graphing Equations in Two Variables -- 4-13: (A-CED.3) Representing Constraints and Interpreting Solutions -- 4-14: (A-CED.4) Highlighting Quantities of Interest in Formulas -- 4-15: (A-REI.1) Justifying Solutions to Equations -- 4-16: (A-REI.2) Solving Rational and Radical Equations -- 4-17: (A-REI.3) Solving Multi-Step Linear Equations in One Variable -- 4-18: (A-REI.3) Solving Multi-Step Linear Inequalities in One Variable -- 4-19: (A-REI.4) Solving a Quadratic Equation by Completing the Square -- 4-20: (A-REI.4) Solving Quadratic Equations in a Variety of Ways -- 4-21:

(A-REI.5) Solving Systems of Equations -- 4-22: (A-REI.6) Solving Systems of Linear Equations -- 4-23: (A.REI.7) Solving a System of a Linear and a Quadratic Equation -- 4-24: (A-REI.10) Relating Graphs to the Solutions of Equations -- 4-25: (A-REI.11) Using Graphs and Tables to Find Solutions to Systems of Equations. 4-26: (A-REI.12) Solving Systems of Inequalities by Graphing --Reproducibles for Section 4 -- Section 5:Functions -- Teaching Notes for the Activities of Section 5 -- 5-1: (8.F.1) Identifying Functions -- 5-2: (8.F.2) Comparing Functions -- 5-3: (8.F.3) Determining Whether Data Lies on a Line -- 5-4: (8.F.4) Finding the Slope and Y-Intercept of a Line -- 5-5: (8.F.5) Analyzing and Graphing Functions -- 5-6: (F-IF. 1) Understanding Functions -- 5-7: (F-IF.2) Finding the Values of Functions -- 5-8: (F-IF.3) Defining Sequences Recursively -- 5-9: (F-IF. 4) Identifying Key Features of Graphs -- 5-10: (F-IF.5) Relating the Domain of a Function to Its Graph or Description -- 5-11: (F-IF.6) Finding the Average Rate of Change over Specified Intervals -- 5-12: (F-IF.7) Graphing Linear and Quadratic Functions -- 5-13: (F-IF.7) Graphing Polynomial Functions -- 5-14: (F-IF.8) Rewriting Quadratic Equations -- 5-15: (F-IF.9) Comparing Properties of Functions -- 5-16: (F-BF.1) Writing Functions -- 5-17: (F-BF.2) Writing Arithmetic and Geometric Sequences -- 5-18: (F-BF.3) Transforming a Function -- 5-19: (F-BF.4) Finding the Inverses of Functions -- 5-20: (F-LE.1) Proving Linear Functions Grow by Equal Differences over Equal Intervals -- 5-21: (F-LE.1) Proving Exponential Functions Grow by Equal Factors over Equal Intervals -- 5-22: (F-LE.2) Constructing Linear and Exponential Functions -- 5-23: (F-LE.3) Observing the Behavior of Quantities That Increase Exponentially -- 5-24: (F-LE.4) Writing and Solving Exponential Equations -- 5-25: (F-LE.5) Interpreting Parameters in a Linear or Exponential Function -- 5-26: (F-TF.1) Using Radian and Degree Measures -- 5-27: (F-TF.2) Using the Unit Circle -- 5-28: (F-TF.5) Modeling Periodic Phenomena -- 5-29: (F-TF.8) Finding the Values of the Sine, Cosine, and Tangent Functions -- Reproducibles for Section 6: Statistics and Probability -- Teaching Notes for the Activities of Section 6 -- 6-1: (6.SP.1) Identifying Statistical Questions -- 6-2: (6. SP.2) Describing Data Distributions -- 6-3: (6.SP.3) Finding the Mean, Median, Mode, and Range -- 6-4: (6.SP.4) Using Dot Plots to Display Data -- 6-5: (6.SP.4) Constructing a Box Plot -- 6-6: (6.SP.5) Summarizing and Describing Data -- 6-7: (7.SP.1) Drawing Inferences from Samples -- 6-8: (7.SP.2) Drawing Inferences about a Population Using Random Samples -- 6-9: (7.SP.3) Comparing Two Data Sets --6-10: (7.SP.4) Drawing Inferences about Populations -- 6-11: (7.SP.5) Understanding the Probability of Events -- 6-12: (7.SP.6) Probabilities and Predictions -- 6-13: (7.SP.7) Using Probability Models to Find Probabilities of Events -- 6-14: (7.SP.8) Understanding the Probability of Compound Events -- 6-15: (7.SP.8) Finding Probabilities of Compound Events Using Tables, Lists, and Tree Diagrams -- 6-16: (8. SP.1) Constructing and Interpreting Scatter Plots -- 6-17: (8.SP.2) Fitting Lines to Data -- 6-18: (8.SP.3) Using Equations of Linear Models -- 6-19: (8.SP.4) Constructing and Interpreting Two-Way Tables -- 6-20: (S-ID.1) Representing Data with Plots on the Real Number Line --6-21: (S-ID.2) Comparing Two Data Sets -- 6-22: (S-ID.3) Interpreting Differences in Shape, Center, and Spread of Data Distributions -- 6-23: (S-ID.4) Recognizing Characteristics of Normal Distributions -- 6-24: (S-ID.5) Summarizing Categorical Data in Two-Way Frequency Tables -- 6-25: (S-ID.6) Finding the Equation of the Line of Best Fit -- 6-26:

(S-ID.6) Using Linear and Quadratic Models -- 6-27: (S-ID.7)

Interpreting the Slope and Y-Intercept of a Linear Model -- 6-28: (S-ID.

8) Computing and Interpreting the Correlation Coefficient -- 6-29: (S-ID.9) Distinguishing between Correlation and Causation. 6-30: (S-IC.1) Understanding the Terminology of Statistical Experiments.

Sommario/riassunto

"Help your students succeed with classroom-ready, standards-based activities The Algebra Teacher's Activities Kit: 150 Activities That Support Algebra in the Common Core Math Standards helps you bring the standards into your algebra classroom with a range of engaging activities that reinforce fundamental algebra skills. This newly updated second edition is formatted for easy implementation, with teaching notes and answers followed by reproducibles for activities covering the algebra standards for grades 6 through 12. Coverage includes whole numbers, variables, equations, inequalities, graphing, polynomials, factoring, logarithmic functions, statistics, and more, and gives you the material you need to reach students of various abilities and learning styles. Many of these activities are self-correcting, adding interest for students and saving you time. This book provides dozens of activities that Directly address each Common Core algebra standard Engage students and get them excited about math Are tailored to a diverse range of levels and abilities Reinforce fundamental skills and demonstrate everyday relevance Algebra lays the groundwork for every math class that comes after it, so it's crucial that students master the material and gain confidence in their abilities. The Algebra Teacher's Activities Kit helps you face the challenge, well-armed with effective activities that help students become successful in algebra class and beyond"--