

Cocalico School District
Year-at-a-Glance - Curriculum Overview

Department: Math

Course: Algebra 1 (103)

Grade Level: 9-10

Big Ideas

- Solve and write equations and inequalities including absolute value in order to solve problems.
- Identify, write, graph and use linear equations in slope-intercept form ($y = mx+b$) and point-slope form ($(y-y_1) = m(x-x_1)$) and standard form $Ax+By=C$.
- Solve systems of linear equations and inequalities by graphing, substitution, and elimination.
- Evaluate and simplify expressions with exponents, including rational exponents; find the n th roots.
- Identify, evaluate, solve, and graph exponential functions and geometric sequences.
- Simplify (add, subtract and multiply) polynomials and solve quadratic equations.
- Analyze, interpret, display, and use data in variety forms.
- Find the probabilities of a variety of events including compound events.

| Units of Study | % of Course Time | Textbooks & Supplemental Materials | Assessments | Standards Addressed |
|---------------------------------------------------------------------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> • Solving Linear Equations | 10% | <ul style="list-style-type: none"> • Big Ideas Math – <i>Algebra 1- A Common Core Curriculum</i> by Ron Larson and Laurie Boswell: Chapter 1 • Scientific or Graphing Calculator • Supplemental Resources | <ul style="list-style-type: none"> • Chapter Quizzes • Chapter Test | <ul style="list-style-type: none"> • CC.2.1.HS.F.3 • CC.2.1.HS.F.4 • CC.2.1.HS.F.5 • CC.2.2.8.B.3 • CC.2.2.8.C.1 • CC.2.2.8.C.2 • CC.2.2.HS.C.3 • CC.2.2.HS.D.7 • CC.2.2.HS.D.8 • CC.2.2.HS.D.9 • CC.2.2.HS.D.10 |
| <ul style="list-style-type: none"> • Solving Linear Inequalities | 10% | <ul style="list-style-type: none"> • Big Ideas Math – <i>Algebra 1: Chapter 2</i> • Scientific or Graphing Calculator • Supplemental Resources | <ul style="list-style-type: none"> • Chapter Quizzes • Chapter Test | <ul style="list-style-type: none"> • CC.2.1.HS.F.3 • CC.2.1.HS.F.4 • CC.2.1.HS.F.5 • CC.2.2.8.B.3 • CC.2.2.8.C.1 • CC.2.2.8.C.2 • CC.2.2.HS.C.3 • CC.2.2.HS.D.7 • CC.2.2.HS.D.8 • CC.2.2.HS.D.9 • CC.2.2.HS.D.10 |
| <ul style="list-style-type: none"> • Graphing Linear Functions | 20% | <ul style="list-style-type: none"> • Big Ideas Math – <i>Algebra 1: Chapter 3</i> • Scientific or Graphing Calculator • Supplemental Resources | <ul style="list-style-type: none"> • Chapter Quizzes • Chapter Test | <ul style="list-style-type: none"> • CC.2.1.HS.F.3 • CC.2.1.HS.F.4 • CC.2.1.HS.F.5 • CC.2.2.8.B.3 • CC.2.2.8.C.1 • CC.2.2.8.C.2 • CC.2.2.HS.C.3 • CC.2.2.HS.D.7 • CC.2.2.HS.D.8 • CC.2.2.HS.D.9 • CC.2.2.HS.D.10 |
| <ul style="list-style-type: none"> • Writing Linear Functions | 20% | <ul style="list-style-type: none"> • Big Ideas Math – <i>Algebra 1: Chapter 4</i> | <ul style="list-style-type: none"> • Chapter Quizzes • Chapter Test | <ul style="list-style-type: none"> • CC.2.1.HS.F.3 • CC.2.1.HS.F.4 |

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| | | <ul style="list-style-type: none"> Scientific or Graphing Calculator Supplemental Resources | | <ul style="list-style-type: none"> CC.2.1.HS.F.5 CC.2.2.8.B.3 CC.2.2.8.C.1 CC.2.2.8.C.2 CC.2.2.HS.C.3 CC.2.2.HS.D.7 CC.2.2.HS.D.8 CC.2.2.HS.D.9 CC.2.2.HS.D.10 |
| <ul style="list-style-type: none"> Solving Systems of Linear Equations | 15% | <ul style="list-style-type: none"> Big Ideas Math – <i>Algebra 1</i>: Chapter 5 Scientific or Graphing Calculator Supplemental Resources | <ul style="list-style-type: none"> Chapter Quizzes Chapter Test | <ul style="list-style-type: none"> CC.2.1.HS.F.5 CC.2.2.8.B.3 CC.2.2.HS.D.7 CC.2.2.HS.D.9 CC.2.2.HS.D.10 |
| <ul style="list-style-type: none"> Exponential Functions and Sequences 6.1 Properties of Exponents | 5% | <ul style="list-style-type: none"> Big Ideas Math – <i>Algebra 1</i>: Chapter 6 Scientific or Graphing Calculator Supplemental Resources | <ul style="list-style-type: none"> Chapter Quizzes Chapter Test | <ul style="list-style-type: none"> CC.2.1.HS.F.1 CC.2.1.HS.F.2 CC.2.2.HS.D.9 CC.2.2.HS.C.1 CC.2.2.HS.C.2 CC.2.2.HS.C.3 CC.2.2.HS.C.5 CC.2.2.8.B.1 |
| <ul style="list-style-type: none"> Polynomial Equations and Factoring | 10% | <ul style="list-style-type: none"> Big Ideas Math – <i>Algebra 1</i>: Chapter 7 Scientific or Graphing Calculator Supplemental Resources | <ul style="list-style-type: none"> Chapter Quizzes Chapter Test | <ul style="list-style-type: none"> CC.2.2.HS.D.1 CC.2.2.HS.D.2 CC.2.2.HS.D.3 CC.2.2.HS.D.5 CC.2.2.HS.D.6 |
| <ul style="list-style-type: none"> Data Analysis and Displays | 5% | <ul style="list-style-type: none"> Big Ideas Math – <i>Algebra 1</i>: Chapter 11 Scientific or Graphing Calculator Supplemental Resources | <ul style="list-style-type: none"> Chapter Quizzes Chapter Test | <ul style="list-style-type: none"> CC.2.2.HS.C.6 CC.2.4.HS.B.1 CC.2.4.HS.B.2 CC.2.4.HS.B.3 CC.2.4.HS.B.4 CC.2.4.HS.B.5 |
| <ul style="list-style-type: none"> Counting Methods and Probability | 5% | <ul style="list-style-type: none"> <i>Algebra 2</i> by McDougal Littell: Chapter 10 Scientific or Graphing Calculator Supplemental Resources | <ul style="list-style-type: none"> Chapter Quizzes Chapter Test | <ul style="list-style-type: none"> CC.2.4.HS.B.4 CC.2.4.HS.B.7 |



Eagle P.A.C.T. Course Connections:

Algebra 1 103 encourages students to use problem solving skills as they study a variety of topics involving linear and exponential equations and inequalities, polynomial equations, and factoring, graphing and solving quadratic equations, radical functions and equations, probability and data analysis to prepare for the Algebra 1 Keystone Exam that they will take at the end of the course. Students will have opportunities to work together to collaborate and communicate their algebraic thinking.