

CORD COMMUNICATIONS CORRELATION OF ALGEBRA 2: MATHEMATICS IN CONTEXT

MISSISSIPPI CURRICULUM FRAMEWORK: ALGEBRA II

CONTENT STRANDS:

Number and Operations Algebra
 Geometry Measurement
 Data Analysis & Probability

Competency		
1. Understand relationships among numbers and compute fluently. Verify with technology.		
Objectives	Pupil Edition Page References	Teacher Edition Page References
a. Diagram the relationship among the subsets of the complex number system. (DOK 2)	4-10, 223-227, 270	4-10, 223-227, 270
b. Compute with rational and radical expressions and complex numbers, expressing in simplest form. (DOK 1)	206-212, 213-217, 231-237, 438-442, 443-446, 452-456, 464-469	206-212, 213-217, 231-237, 438-442, 443-446, 452-456, 464-469
c. Evaluate powers of the imaginary unit, i . (DOK 1)	223-227	223-227
d. Perform computations, including addition, scalar multiplication, multiplication, determinants, and inverses on matrices. (DOK 1)	106-111, 112-116, 117-122, 123—128, 139-147	106-111, 112-116, 117-122, 123—128, 139-147
e. Solve applications and problems in mathematical settings involving arithmetic and geometric sequences and series. (DOK 3)	481-486, 487-492, 493-498, 506-513	481-486, 487-492, 493-498, 506-513
f. Explain and use the inverse relationship between exponential and logarithmic expressions. (DOK 2)	348-353	348-353
g. Use the properties of logarithms to simplify logarithmic expressions and to find their approximate values. (DOK 1)	348-353, 354-359, 360-364	348-353, 354-359, 360-364
h. Solve application problems involving exponential functions related to growth and decay. (DOK 3)	342-347, 370-375, 379-385	342-347, 370-375, 379-385

Competency		
2. Use algebraic concepts to identify patterns, sue multiple representations of relations and functions, and apply operations to expressions, equations, and inequalities.		
Objectives	Pupil Edition Page References	Teacher Edition Page References
a. Solve compound and absolute value inequalities, graphing and writing solutions in interval notation. (DOK 2)	11-16, 17-22	11-16, 17-22
b. Solve systems of absolute value and quadratic equations using a variety of solution methods including graphing. (DOK 2)	323-327	323-327
c. Given constraints, find the maximum and minimum value(s) of a system of linear inequalities and explain your reasoning. (DOK 2)	73-77, 78-83, 92-93, 95, 96	73-77, 78-83, 92-93, 95, 96
d. Given the solution(s) to a quadratic equation, find a quadratic equation to fit the solution(s) and explain or justify the solution process. (DOK 2)	NA covered with polynomials 408-412	NA covered with polynomials 408-412
e. Use the discriminant to classify and predict the types of solutions of quadratic equations and justify the classification. (DOK 2)	266-268	266-268
f. Factor sums and differences of cubes and factor polynomials by grouping. (DOK 2)	398-402, 421	398-402, 421
g. Solve radical equations. (DOK 2)	218-222	218-222
h. Write equivalent forms of rational expressions using real and complex conjugates. (DOK 2)	209-211, 214, 223-227, 272, 414-418	209-211, 214, 223-227, 272, 414-418
i. Solve equations involving rational expressions and verify solutions. (DOK 2)	447-451, 464-469	447-451, 464-469
j. Explain the results of compositions of functions (DOK 2)	163-167	163-167
k. Explain the Binomial Theorem and use it to expand binomial expressions raised to positive integral powers. (DOK 2)	499-503	499-503
l. Interpret the zeros and maximum or minimum value(s) of quadratic functions. (DOK 2)	244-248, 249-252, 253-258, 259-264, 265-269, 270-273, 277-282	244-248, 249-252, 253-258, 259-264, 265-269, 270-273, 277-282

Competency		
3. Use coordinate geometry to specify locations, describe relationships, and apply transformations to analyze algebraic relationships.		
Objectives	Pupil Edition Page References	Teacher Edition Page References
a. Determine and justify whether the inverse of a relation or a function exists. (DOK 2)	168-171, 188, 192	168-171, 188, 192
b. Classify functions based on sketches of their graphs. (DOK 2)	172-178, 193	172-178, 193
c. Sketch and describe transformations of quadratic and absolute value functions. (DOK 2)	179-184	179-184
d. Represent complex numbers and the sum of complex numbers in a complex coordinate plane. (DOK 1)	226	226
e. Identify and sketch the essential graphs of the four conic sections: circle, parabola, ellipse, and hyperbola. (DOK 1)	293-296, 297-303, 304-310, 311-315, 316-322, 330-335	293-296, 297-303, 304-310, 311-315, 316-322, 330-335
Competency		
4. Understand measurable attributes of objects and apply appropriate techniques and formulas to determine measurements.		
Objectives	Pupil Edition Page References	Teacher Edition Page References
a. Verify the appropriateness of the numerical value and the units of a variable in an equation. (DOK 2)	NA	NA
b. Describe the level of accuracy of measurements in real-world situations by using absolute value inequalities. (DOK 1)	18-19, 22(#28, 31)	18-19, 22(#28, 31)

Competency 5. Use technology to represent, analyze, and make inferences based on data.	Pupil Edition Page References	Teacher Edition Page References
Objectives		
a. Through the use of technology, use scatter plots and linear and quadratic regression analysis to determine an appropriate function to model real-life data. (DOK 3)	36-42	36-42
b. Solve simple combinations. (DOK 2)	627-630	627-630
c. Model a data set using the median-fit-method with a linear equation and make predictions based on the model and the equation. (DOK 3)	NA	NA
d. Identify the difference between permutations and combinations and use them to solve real-world problems. (DOK 2)	623-626, 627-630	623-626, 627-630

- All competencies and objectives must be listed even though you may not correlate to the competencies and/or objectives. Please write "NA" in the page reference if there is no correlation.
- If you have an annotated teacher edition (ATE), then you may correlate to that one book as it contains both the pupil and teacher edition. Please indicate that you are correlating to the ATE.
- If you have a series of books that are being submitted, please do a correlation for each book. Each book's correlation should stand-alone.