CORD COMMUNICATIONS CORRELATION OF ALGEBRA 1: MATHEMATICS IN CONTEXT

MISSISSIPPI CURRICULUM FRAMEWORK: ALGEBRA I

CONTENT STRANDS:

Number and Operations — Algebra
Geometry — Measurement
Data Analysis & Probability

Competency 1. **Understand relationships between numbers and their properties and perform operations fluently.**		
Objectives	**Pupil Edition Page References**	**Teacher Edition Page References**
a. Apply properties of real numbers to simplify algebraic expressions, including polynomials. (DOK 1)	80-84, 85-92, 558-563, 570-574, 575-580	80-84, 85-92, 558-563, 570-574, 575-580
b. Use matrices to solve mathematical situations and contextual problems. (DOK 2)	32-36, 56-58, 63-64	32-36, 56-58, 63-64
Competency **2. Understand, represent, and analyze patterns, relations, and functions.**		
Objectives	**Pupil Edition Page References**	**Teacher Edition Page References**
a. Solve, check, and graph multi-step linear equations and inequalities in one variable, including rational coefficients in mathematical and real-world situations. (DOK 2)	146-154, 155-160, 161-168, 169-174, 175-179, 185-189, 190-201, 496-500, 501-505, 506-511, 512-518, 544-553	146-154, 155-160, 161-168, 169-174, 175-179, 185-189, 190-201, 496-500, 501-505, 506-511, 512-518, 544-553
b. Solve and graph absolute value equations and inequalities on one variable. (DOK 2)	180-184, 191, 519-522	180-184, 191, 519-522
c. Analyze the relationship between *x* and *y* values, determine whether a relation is a function, and identify domain and range. (DOK 2)	280-286, 287-290	280-286, 287-290
d. Explain and illustrate how a change in one variable may result in a change in another variable and apply to the relationships between independent and dependent variables. (DOK 2)	213-217, 218-224, 241-248, 255-259, 265-275	213-217, 218-224, 241-248, 255-259, 265-275

e. Graph and analyze linear functions. (DOK 2)	213-217, 218-224, 225-233, 234-240, 255-259, 265-275	213-217, 218-224, 225-233, 234-240, 255-259, 265-275
f. Use algebraic and graphical methods to solve systems of linear equations and inequalities in mathematical and real-world situations. (DOK 2)	442-448, 449-454, 456-461, 463-469, 470-475, 476-480, 481-491, 532-536, 541-543, 546-550	442-448, 449-454, 456-461, 463-469, 470-475, 476-480, 481-491, 532-536, 541-543, 546-550
g. Add, subtract, multiply, and divide polynomial expressions. (DOK 1)	558-563, 570-574, 575-580, 586-591, 593-599, 611-615	558-563, 570-574, 575-580, 586-591, 593-599, 611-615
h. Factor polynomials by using Greatest Common Factor (GCF) and factor quadratics that have only rational roots. (DOK 1)	564-569, 570-574, 593-599, 601-606, 611-615	564-569, 570-574, 593-599, 601-606, 611-615
i. Determine the solutions to quadratic equations by using graphing, tables, completing the square, the quadratic formula, and factoring. (DOK 1)	626-632, 633-636, 638-643, 645-648, 649-656, 657-663, 664-675	626-632, 633-636, 638-643, 645-648, 649-656, 657-663, 664-675
j. Justify why some polynomials are prime over the rational number system. (DOK 2)	568, 602 (Critical Thinking)	568, 602 (Critical Thinking)
k. Graph and analyze absolute value and quadratic functions. (DOK 2)	296-303, 323-337, 620-624, 626-632	296-303, 323-337, 620-624, 626-632
l. Write, graph, and analyze inequalities in two variables. (DOK 2)	523-531, 547-548, 551-552	523-531, 547-548, 551-552
Competency 3. **Understand how algebra and geometric representations interconnect and build on one another.**		
Objectives	**Pupil Edition Page References**	**Teacher Edition Page References**
a. Apply the concept of slope to determine if lines in a plane are parallel or perpendicular. (DOK 2)	249-254, 269	249-254, 269
b. Solve problems that involve interpreting slope as a rate of change. (DOK 2)	218-224, 265-275, 291-295	218-224, 265-275, 291-295

Competency **4. Demonstrate and apply various formulas in problem-solving situations.**		
Objectives	**Pupil Edition Page References**	**Teacher Edition Page References**
a. Solve real-world problems involving formulas for perimeter, area, distance, and rate. (DOK 2)	97-102, 103-106, 122, 128-141	97-102, 103-106, 122, 128-141
b. Explain and apply the appropriate formula to determine length, midpoint, and slope of a segment in a coordinate plane. (i.e., distance formula, Pythagorean Theorem). (DOK 2)	218-224, 307-311, 688-693	218-224, 307-311, 688-693
c. Represent polynomial operations with area models. (DOK 2)	559, 563, 570, 586-591, 593-594, 607-608	559, 563, 570, 586-591, 593-594, 607-608
Competency **5. Represent, analyze and make inferences based on data with and without the use of technology.**		
Objectives	**Pupil Edition Page References**	**Teacher Edition Page References**
a. Draw conclusions and make predictions from scatter plots. (DOK 3)	404-410, 432, 437	404-410, 432, 437
b. Use linear regression to find the line-of-best fit from a given set of data. (DOK 3)	404-410, 432, 437	404-410, 432, 437

- 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.