

CORD COMMUNICATIONS CORRELATION OF GEOMETRY: MATHEMATICS IN CONTEXT

MISSISSIPPI CURRICULUM FRAMEWORK: GEOMETRY

CONTENT STRANDS:

Number and Operations Algebra
 Geometry Measurement
 Data Analysis & Probability

Competency		
1. Compute and determine the reasonableness of a result in mathematical and real-world situations with and without technology.		
Objectives	Pupil Edition Page References	Teacher Edition Page References
a. Apply problem-solving skills to solve and verify the solutions for unknown measures in similar polygons. (DOK 2)	316-322, 323-330, 331-334, 335-340, 367-372, 373-385, 487-491	316-322, 323-330, 331-334, 335-340, 367-372, 373-385, 487-491
b. Given exact irrational solutions, determine the best rational estimation. (DOK 2)	342, 343, 382, 501- 503	342, 343, 382, 501- 503
c. Solve real-world or application problems that involve square roots and the Pythagorean Theorem. (DOK 3)	341-347	341-347

Competency 2. Understand relations, functions, and patterns. Analyze change using various geometric properties.		
Objectives	Pupil Edition Page References	Teacher Edition Page References
a. Represent data from geometric and real-world contexts with expressions, formulas, tables, charts, graphs, relations, and functions. (DOK 2)	Used throughout the text, especially in Math Labs and Math Applications (for examples see pages 438-453 and 497-513)	Used throughout the text, especially in Math Labs and Math Applications (for examples see pages 438-453 and 497-513)
b. Recognize and write the equation of a circle in standard form $(x-h)^2 + (y-k)^2 = r^2$ and identify the center and radius. (DOK 2)	518-524, 564-565	518-524, 564-565
c. Use slope to analyze and write equations for parallel and perpendicular lines. (DOK 2)	142-146, 403-412, 439-440	142-146, 403-412, 439-440
d. Apply the Midpoint and Distance Formulas to solve application problems involving the coordinate plane. (DOK 2)	390-396	390-396
e. Determine the effects of rigid (translations, rotations, and reflections) and non-rigid (dilations) motions and compositions when performed on objects on the coordinate plane. (DOK 2)	666-673, 674-680, 681-687, 688-693, 694-697, 698-704, 705-711, 712-720, 721-728	666-673, 674-680, 681-687, 688-693, 694-697, 698-704, 705-711, 712-720, 721-728

Competency		
3. Investigate, apply, and prove properties and theorems from postulates and definitions related to angles, lines, circles, polygons, and two- and three-dimensional figures. Explore applications of patterns and transformational geometry.		
Objectives	Pupil Edition Page References	Teacher Edition Page References
a. Use inductive reasoning to make conjectures and deductive reasoning to make valid conclusions. (DOK 3)	68-73, 74-79, 85-88, 89-94, 95-102, 123-135	68-73, 74-79, 85-88, 89-94, 95-102, 123-135
b. Develop and evaluate mathematical arguments and proofs to include paragraph two-column, and flow chart forms. (DOK 3)	89-94, 95-102, 103-109, 110-114, 421-428	89-94, 95-102, 103-109, 110-114, 421-428
c. Identify, classify, and apply angle relationships formed by parallel lines cut by transversals. (DOK 2)	148-154, 155-161	148-154, 155-161
d. Use the properties of altitudes, medians, angle bisectors, and perpendicular bisectors of triangles to solve problems. (DOK 2)	231-236, 237-241	231-236, 237-241
e. Classify triangles and apply postulates and theorems to test for triangle inequality, congruence, and similarity. (DOK 2)	162-170, 171-178, 179-183, 184-189, 190-199, 204-210, 211-217, 218-223, 224-230, 242-250	162-170, 171-178, 179-183, 184-189, 190-199, 204-210, 211-217, 218-223, 224-230, 242-250
f. Determine and justify if a given shape could be tessellated. (DOK 2)	694-697	694-697
g. Describe and draw cross-sections of prisms, cylinders, pyramids, and cones. (DOK 1)	637-641	637-641
h. Graph a vector and determine the magnitude and direction the magnitude and direction of a given vector. (DOK 2)	397-403	397-403
i. Given the pre-image or image, find figures obtained by applying reflections, translations, rotations, and dilations; describe and justify the method used. (DOK 2)	666-673, 674-680, 681-687, 688-693, 694-697, 698-704, 705-711, 712-720, 721-728	666-673, 674-680, 681-687, 688-693, 694-697, 698-704, 705-711, 712-720, 721-728

Competency 4. Select and apply various strategies, tools, and formulas to calculate length, surface area, volume, and angle measurements.		
Objectives	Pupil Edition Page References	Teacher Edition Page References
a. Use the properties of circles using arc, angle, and segment relationships to find missing measures. (DOK 2)	525-532, 533-541, 542-549, 550-556, 565-570, 571-577	525-532, 533-541, 542-549, 550-556, 565-570, 571-577
b. Solve real-world applications and mathematical problems to find missing measurements in right triangles by applying special right triangle relationships, geometric means, or trigonometric functions. (DOK 2)	341-347, 348-353, 354-360, 361-366, 367-372, 373-381	341-347, 348-353, 354-360, 361-366, 367-372, 373-381
c. Solve real-world and mathematical problems involving the lateral area, surface area and volume of three-dimensional figures, including prisms, cylinders, cones, pyramids, and spheres. (DOK 2)	596-604, 605-611, 612-618, 619-624, 626-631, 632-636, 647-649, 650-660	596-604, 605-611, 612-618, 619-624, 626-631, 632-636, 647-649, 650-660
d. Explain and use the properties of 45-45-90 and 30-60-90 triangles. (DOK 2)	348-353, 383-384	348-353, 383-384
e. Apply the relationships of sine, cosine, and tangent to problems involving right triangles. (DOK 2)	354-360, 361-366, 383-384	354-360, 361-366, 383-384
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. Apply multiple strategies and representations, including area models, to solve probability problems. (DOK 2)	492-496	492-496

- 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.