

Kentucky Geometry Standards to CORD Geometry, 2nd Edition

Geometry

This chart lists the concepts in a geometry course. High school mathematics programs are grounded in Academic Expectations 1.5 to 1.9; Mathematical Communication and Reasoning; 1.16, Technology; 2.7, Number Concepts; 2.8, Mathematical Procedures; 2.9, Space and Dimensionality; 2.10, Measurement; 2.11, Change; 2.12, Mathematical Structure; 2.13, Probability and Statistics; Goal 5, Think and Solve Problems; and Goal 6, Connect and Integrate Knowledge.

General Relationships

M-H-G-1

Students will find angle relationships such as vertical angles, linear pairs, complementary angles, and supplementary angles.

Pages or Location: 23-24, 26-29, 35, 43, 64, 73, 75-76, 88, 104-105, 107-108, 112-114, 130-131, 148-153, 199, 217, 230, 261, 274, 284, 290, 347, 551, 673

M-H-G-2

Students will identify relationships between and among points, lines, and planes, such as betweenness of points, midpoint, distance, collinear, coplanar, parallel, and skew lines.

Pages or Location: 4-11, 12-18, 30-34, 140-147, 148-154

M-H-G-3

Students will find the intersection of lines, planes, and solids.

Pages or Location: 4-11, 637-641

M-H-G-4

Students will connect geometric diagrams with algebraic representations.

Pages or Location: 14-18, 25, 27, 44-45, 95-102, 140-147, 183, 335-340, 341-347, 348-353, 354-360, 361-366, 390-396, 397-404, 405-412, 413-420, 518-524, 559-560, 698-704

M-H-G-5

Students will integrate constructions such as segments and angles, segment bisectors, perpendiculars, angle bisectors, parallel lines, circles, arcs, and polygons.

Pages or Location: 36-46, 48-50, 53, 59, 61, 64, 65, 68, 73, 94, 109, 147, 155, 178, 207, 211, 223, 234, 235, 237-238, 249, 267, 278, 281, 285, 286, 319, 320, 323-325, 327, 335, 343, 428, 531, 536, 546, 571, 669, 704

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M-H-G-6

Students will describe, draw, and construct two-dimensional and three-dimensional figures.

Pages or Location: 207, 211, 223, 501-503, 582-588, 589-595, 597, 612-618, 643-646, 647-649, 654, 657, 663, 697

Relationships in Triangles

M-H-G-7

Students will use angle and side relationships such as triangle sum theorem, triangle inequalities, isosceles and equilateral triangle properties, altitude, and median.

Pages or Location: 162-170, 171-178, 179-183, 188-189, 190-201, 224-230, 231-236, 595, 611, 727

M-H-G-8

Students will use Pythagorean theorem and its converse.

Pages or Location: 341-347, 360, 369-371, 376, 378, 381, 385-387, 391, 407, 411, 473, 474, 504, 512, 537, 545, 576, 631, 653, 656

M-H-G-9

Students will use right triangle relationships such as trigonometric ratios (45-45-90 and 30-60-90 triangles).

Pages or Location: 348-353, 354-360, 361-366, 369-371, 373-387, 396, 448, 451, 478, 491, 496, 505, 529, 532, 577, 711

Quadrilateral Relationships

M-H-G-10

Students will use properties of quadrilaterals such as classification.

Pages or Location: 268-272, 273-278, 279-284, 285-290, 297-307, 322, 353, 420, 453

Other Polygons and Circles

M-H-G-11

Students will use properties of other polygons.

Pages or Location: 256-261, 262-267

M-H-G-12

Students will use properties of circles, arcs, chords, central angles, inscribed angles, and concentric circles.

Pages or Location: 518-524, 525-532, 533-541, 542-549, 550-556, 571-579, 618, 625, 697

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M-H-G-13

Students will use inscribed and circumscribed polygons.

Pages or Location: 503, 513, 515, 528-532, 577, 697, TE 485

Congruence and Similarity

M-H-G-14

Students will prove triangles and other polygons congruent and similar, and explore corresponding parts relationships.

Pages or Location: 204-210, 211-217, 218-223, 224-230, 242-253, 274, 275-276, 278, 280, 284, 315, 316-322, 323-330, 331-334, 335-340, 341-347, 348-353, 354-360, 361-366, 367-369, 371-372, 373-387, 404, 470, 487-491, 512, 524, 541, 603, 611, 625, 641, 687, 718-720

M-H-G-15

Students will use proportional reasoning to solve real-world problems, to do indirect measurements, and to make scale drawings.

Pages or Location: 65, 102, 245, 247, 267, 269, 302, 310-315, 316-322, 323-330, 331-334, 335-340, 341-347, 348-353, 354-360, 361-366, 367-369, 371-372, 373-387, 424, 464, 467, 470, 487-491, 512, 524, 532, 549, 603, 611, 625, 632-636, 641, 642-643, 660, 662, 705, 718-720, 727

Measurements

M-H-G-16

Students will use relationships among one-, two-, and three-dimensional measures.

Pages or Location: 12-18, 41, 43, 79, 179-183, 236, 259, 261, 290, 300, 318, 321, 328, 330, 341-347, 348-353, 354-360, 361-366, 373-387, 391, 406, 411, 458-464, 465-470, 471-476, 477-480, 481-486, 487-491, 492-496, 497-503, 504-515, 523, 528, 529, 533-541, 542-549, 550-556, 565-567, 567-570, 571-579, 595, 596-604, 605-611, 613, 614, 616-618, 619-625, 631, 641, 650-662, 673, 680, 693, 697, 711, 718-720

M-H-G-17

Students will use perimeter, circumference, and area of planar regions to determine volume and surface area of solids.

Pages or Location: 596-604, 605-611, 612-618, 619-625, 626-631, 632-636, 647-649, 650-663, 693

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M-H-G-18

Students will convert from one measure to another within the same system.

Pages or Location: 607, 630, 650, 660, 663

Coordinate Geometry and Transformations

M-H-G-19

Students will represent geometric figures and properties using coordinates.

Pages or Location: 298, 395-396, 421-428, 437, 446, 448, 452, 453, 455, 461, 463, 469, 506, 518-524, 564-565, 572, 574, 579, 611, 618, 636, 671

M-H-G-20

Students will connect the concepts of slope, distance, and midpoint to coordinate geometry.

Pages or Location: 390-396, 406-412, 421, 424, 427, 432, 436, 438-439, 441-443, 444-455, 469, 506, 549, 636

M-H-G-21

Students will use reflections, translations, rotations, and dilations.

Pages or Location: 666-673, 674-680, 681-687, 688-693, 694-697, 698-704, 705-711, 712-720, 721-730

M-H-G-22

Students will explore concepts of vectors.

Pages or Location: 397-404, 422, 433-436, 445, 451, 454-455, 674-680, 700, 701

M-H-G-23

Students will use the relationship between a figure and its image under a transformation (congruence, similarity, size, and scale changes).

Pages or Location: 666-673, 674-680, 681-687, 688-693, 694-697, 698-704, 705-711, 712-720, 721-730