

Mathematics Power Standards Grade 10 Geometry

 Corvallis School District 509j

Calculations and Estimations
<ul style="list-style-type: none"> MA.CM.CE.09 Develop and use strategies to estimate the results of real number computations, determine the amount of error, and judge the reasonableness of results. MA.CM.CE.12 Use the inverse operations (of nth power and nth root) to solve problems and check solutions.
Statistics and Probability
<ul style="list-style-type: none">
Algebraic Relationships
<ul style="list-style-type: none"> MA.CM.AR.02 Produce a valid conjecture using inductive reasoning by generalizing from a pattern of observations.
Measurement
<ul style="list-style-type: none"> MA.CM.ME.02 <i>Solve problems involving unit conversions (e.g., mi/hr to ft/sec) given the unit equivalencies.</i> MA.CM.ME.05 <i>Use formulas to solve problems including finding missing dimensions given perimeter, area, surface area, and volume of polygons, circles, prisms, pyramids, cones, cylinders, and spheres.</i>
Geometry
<ul style="list-style-type: none"> MA.CM.GM.02 Recognize and represent three-dimensional figures and their component parts. MA.CM.GM.03 Justify and use theorems involving the angles formed by parallel lines cut by a transversal. MA.CM.GM.09 <i>Use trigonometric functions, and angle and side relationships of special right triangles (30- 60-right triangles and isosceles right triangles) to solve for an unknown length and determine distances and solve problems.</i> MA.CM.GM.11 Construct and judge the validity of a logical argument and give counterexamples to disprove a statement. MA.CM.GM.12 Justify and use theorems involving the properties of triangles, quadrilaterals, circles, and their component parts to verify congruence and similarity. MA.CM.GM.13 Model, sketch, label and where appropriate construct cones and spheres, and basic elements of geometric figures (e.g., altitudes, midpoints, medians, angle bisectors, and perpendicular bisectors) using compass and straightedge or technology. MA.CM.GM.14 Describe how two or more objects are related in space (e.g., skew lines, the possible ways three planes might intersect). MA.CM.GM.15 Make a model of a three-dimensional figure from a two-dimensional drawing and make a two-dimensional representation of a three-dimensional object through scale drawings, perspective drawings, blueprints or computer simulations. MA.CM.GM.16 <i>Recognize representations of three-dimensional objects from different perspectives and identify cross-sections of three-dimensional objects.</i> MA.CM.GM.21 <i>Determine the image of a figure on a coordinate graph under translations, reflections, and rotations (and dilations).</i>
Mathematical Problem Solving
<ul style="list-style-type: none"> MA.CM.PS.01 <i>Interpret the concepts of a problem-solving task and translate them into mathematics.</i> MA.CM.PS.02 <i>Choose strategies that can work and then carry out the strategies chosen.</i> MA.CM.PS.03 <i>Produce identifiable evidence of a second look at the concepts/strategies/calculations to defend a solution.</i> MA.CM.PS.04 <i>Use pictures, symbols, and/or vocabulary to convey the path to the identified solution.</i> MA.CM.PS.05 <i>Accurately solve problems using mathematics.</i>