

# Essential Elements: High School: Geometry

## Congruence **G.CO**

### **A Experiment with transformations in the plane.** **M.G.CO.A**

- 1 Know the attributes of geometric elements and two-dimensional shapes. **M.EE.G.CO.1**
    - a Know the attributes of points, rays, lines, line segments, perpendicular lines, parallel lines, and angles. **M.EE.G.CO.1.A**
    - b Know the attributes of two-dimensional shapes. **M.EE.G.CO.1.B**
  - 2 Not applicable.
  - 3 Not applicable.
  - 4 Given a geometric figure and a rotation, reflection, or translation of that figure, identify the components of the two figures that are congruent. **M.EE.G.CO.4**
  - 5 Given a geometric figure and a rotation, reflection, or translation of that figure, identify the components of the two figures that are congruent. **M.EE.G.CO.5**
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### **B Understand congruence in terms of rigid motion.** **M.G.CO.B**

- 6 Identify corresponding congruent and similar parts of shapes. **M.EE.G.CO.6**
  - 7 Identify corresponding congruent and similar parts of shapes. **M.EE.G.CO.7**
  - 8 Identify corresponding congruent and similar parts of shapes. **M.EE.G.CO.8**
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### **C Prove geometric theorems.** **M.G.CO.C**

- 9 Not applicable.
  - 10 Not applicable.
  - 11 Not applicable.
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### **D Make geometric constructions.** **M.G.CO.D**

- 12 Not applicable.
  - 13 Not applicable.
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**Similarity, Right Triangles, and Trigonometry** G-SRT

**A Understand similarity in terms of similarity transformations.** M.G.SRT.A

- 1 Not applicable. See M.EE.G.CO.6.
  - 2 Not applicable. See M.EE.G.CO.6.
  - 3 Not applicable. See M.EE.G.CO.6.
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**B Prove theorems involving similarity.** M.G.SRT.B

- 4 Not applicable.
  - 5 Not applicable. See M.EE.G.CO.6.
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**C Define trigonometric ratios and solve problems involving right triangles.**  
**(M)** M.G.SRT.C

- 6 Not applicable.
  - 7 Not applicable.
  - 8 Not applicable.
  - 9 Not applicable.
  - 10 Not applicable.
  - 11 Not applicable.
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**Circles** G-C

**A Understand and apply theorems about circles.** M.G.C.A

- 1 Not applicable.
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**B Find arc lengths and areas of sectors of circles.** M.G.C.B

- 2 Not applicable.
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**Expressing Geometric Properties** G-GPE

**A Translate between the geometric description and the equation for a conic section.** M.G.GPE.A

- 1 Not applicable.
  - 2 Not applicable.
  - 3 Not applicable.
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**B Use coordinates to prove simple geometric theorems algebraically.** M.G.GPE.B

- 4 Not applicable.
  - 5 Not applicable. See M.EE.G.CO.1.
  - 6 Not applicable. See M.EE.G.CO.1.
  - 7 Find perimeters and areas of squares and rectangles to solve real-world problems. M.EE.G.GPE.7
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## Geometric Measurement and Dimension G-GMD

### **A Explain volume formulas and use them to solve problems. (M)** M.G.GMD.A

- 1 Estimate the volumes of containers, the areas of figures, and the perimeters of figures. Check the estimates using formulas or models. M.EE.G.GMD.1
  - 2 Estimate the volumes of containers, the areas of figures, and the perimeters of figures. Check the estimates using formulas or models., M.EE.G.GMD.2
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### **B Visualize relationships between two-dimensional and three-dimensional objects.** M.G.GMD.B

- 3 Not applicable.
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### **C Apply geometric concepts in modeling situations. (M)** M.G.GMD.C

- 4 Use properties of geometric shapes to describe real life objects. M.EE.G.GMD.4
- 5 Use properties of geometric shapes to describe real life objects. M.EE.G.GMD.5
- 6 Use properties of geometric shapes to describe real life objects. M.EE.G.GMD.6