



Unit 7 Geometry and Measurement Math 4

Last Update: August 1, 2026

Archdiocesan Curriculum > Grade 4 > Math > Length of unit 34 to 35 days

Stage 1: Desired Results						
General Information In this unit, students explore geometry and measurement concepts including classifying shapes, identifying angles and symmetry, measuring angles, and working with both customary and metric units. They also solve problems involving elapsed time and real-world measurement scenarios. Mathematical Practices - MP2 – Reason abstractly and quantitatively. - MP4 – Model with mathematics. - MP5 – Use appropriate tools strategically. - MP6 – Attend to precision. - MP7 – Look for and make use of structure.	Essential Question(s) - How can you classify and describe shapes and angles? - What strategies can be used to measure, estimate, and draw angles accurately? - How do you convert and compare measurements in different systems? - How can symmetry and patterns help you understand geometric figures? - How do you apply measurement skills to solve real-world problems involving time, length, volume, and mass?					
	Enduring Understanding/Knowledge Students will: - Identify and draw points, lines, line segments, rays, and angles. - Classify triangles by the sizes of their angles. - Identify and draw parallel lines and perpendicular lines. - Draw a diagram to classify plane shapes. - Check if a shape has line symmetry. - Identify and draw lines of symmetry. - Use the strategy act it out to solve pattern problems. Review/Assess - Relate angles and fractional parts of a circle. - Estimate angle measurements using benchmarks. - Use a protractor to measure and draw angles. - Determine the measure of an angle separated into parts. - Solve real-world problems involving unknown whole-number angle measures using a variety of strategies. Review/Assess - Use benchmarks to help identify the type of unit measurement to use when measuring objects. - Convert and compare length measurements in customary units. - Convert and compare weight measurements. - Convert and compare liquid volume in customary units. - Solve problems that involve mixed measurements.	Vocabulary <table><tr><th>New</th><th>Review</th></tr><tr><td> - acute angle - angle - line - line segment - obtuse angle - point - ray - right angle - straight angle - acute triangle - obtuse triangle - right triangle - intersecting lines - parallel lines - perpendicular lines - venn diagram - line of symmetry - line symmetry - clockwise - counterclockwise - degrees - benchmark angles - protractor - mile - kilometer - ounces - pounds - ton - liquid volume - gallons </td><td> - triangle - shape - classify - symmetry - pattern - measure - estimate - convert - compare - metric system - customary system - mass - time - temperature - angle measurement - unit - benchmark </td></tr></table>		New	Review	- acute angle - angle - line - line segment - obtuse angle - point - ray - right angle - straight angle - acute triangle - obtuse triangle - right triangle - intersecting lines - parallel lines - perpendicular lines - venn diagram - line of symmetry - line symmetry - clockwise - counterclockwise - degrees - benchmark angles - protractor - mile - kilometer - ounces - pounds - ton - liquid volume - gallons
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• Convert and compare length measurements in metric units. • Convert and compare mass and liquid volume measurements in metric units. • Construct and apply the area formula for triangles using decomposition and visual models. Review/Assess • Estimate and measure temperature using a thermometer. • Use models to compare units of time. • Solve real-world problems involving elapsed time. Review/Assess	• half gallons • quarts • pints • cups • fluid ounces • decimeters • millimeters • milliliters • second	
Connections to Catholic Identity / Other Subjects Religion/Catholic Identity: • Find angles, lines, and symmetry in Catholic artwork, such as stained glass or paintings. • https://www.savoringeachmoment.com/50-bible-verses-about-math/ • https://bible.knowing-jesus.com/topics/Math • Bible verse: Genesis 6:15 This is how you shall make it: the length of the ark three hundred cubits, its breadth fifty cubits, and its height thirty cubits. • Source: https://bible.knowing-jesus.com/topics/Math https://www.savoringeachmoment.com/50-bible-verses-about-math/ Other Subject Here: • Language Arts Connections: Students can apply geometry vocabulary (points, lines, angles, symmetry) to enhance descriptive and narrative writing. For example, when describing a setting, students might use precise spatial language such as “parallel streets” or “perpendicular intersections” to create vivid imagery. While reading, students can analyze illustrations or text structures, identifying patterns and symmetry in poetry or story organization. • Social Studies Connections: Geometry skills naturally connect to map reading and geography. Students can identify parallel and perpendicular lines in grid maps, roads, and boundaries, and use points and line segments to represent locations and routes. When studying historical architecture or cultural artifacts, students can classify shapes and identify symmetry in buildings, flags, and designs from different civilizations.	Differentiation Enrichment • Create Geometry Sorting Rules – Allow students to design their own sorting diagrams for classifying shapes based on multiple attributes. • Measure and Analyze Angles in Architecture – Have students identify and measure angles from building photos or real structures. • Design and Convert Recipes – Students modify recipes by converting volume and weight in both customary and metric units. • Analyze Real-World Timelines – Challenge students to create and interpret complex elapsed time problems using real-life schedules. Support • Use Manipulatives for Geometry – Provide straws, string, or geoboards to build and identify lines, angles, and triangles. • Use Visual Anchor Charts for Measurement – Display visual references of measurement units and conversion relationships. • Provide Angle Estimation Benchmarks – Give physical examples or folding activities for 90°, 45°, and 180° to aid estimation. • Elapsed Time Number Lines – Use number lines to model and solve elapsed time problems with clear start and end times. • Hands-On Temperature Practice – Use thermometers and real or simulated temperature readings for contextual learning.	

Standards & Benchmarks

Two-Dimensional Figures:

4.MD.5.a

Understand that an angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through $1/360$ of a circle is called a "one-degree angle," and can be used to measure other angles.

4.MD.AOB.1

Relate the area of a triangle to the area of a rectangle using decomposition and visual models. Derive and apply the formula to solve problems in contexts involving triangles positioned within or formed from the decomposition of triangles.

4.G.2

Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.

4.G.A.2

Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size (e.g., understand right triangles as a category, and identify right triangles).

4.G.1

Draw points, lines, line segments, rays, angles (right, acute, and obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

4.G.A.1

Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

4.G.3

Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.

4.G.A.3

Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can

4.OA.5

Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule "add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.

Measure Angles:

4.G.2

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4.G.1

Draw points, lines, line segments, rays, angles (right, acute, and obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

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4.MD.5.b

Understand that an angle that turns through n one-degree angles is said to have an angle measure of n degrees.

4.MD.6

Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.

4.MD.C.6

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Customary and Metric Measures:

4.MD.1

Know relative sizes of measurement units within each system of units (standard and metric), including kilometers, meters, and centimeters; liters and milliliters; kilograms and grams; pounds and ounces; hours, minutes, and seconds. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. For example, know that one foot is 12 times as long as one inch.

Express the length of a four-foot snake as 48 inches. Know that one meter is 100 times as long as one centimeter. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36)...

4.MD.AOB.1

Relate the area of a triangle to the area of a rectangle using decomposition and visual models. Derive and apply the formula to solve problems in contexts involving triangles positioned within or formed from the decomposition of triangles.

4.MD.2

Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money.

4.MD.A.2

Use the four operations to solve word problems and problems in real-world context involving distances, intervals of time (hr, min, sec), liquid volumes, masses of objects, and money, including decimals and problems involving fractions with like denominators, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using a variety of representations, including number lines that feature a measurement scale.

4.MD.A.1

Know relative sizes of measurement units within one system of units which could include km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit and in a smaller unit in terms of a larger unit.

4.MD.2.a

Include problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit.

Temperature and Time:

4.MD.1

Know relative sizes of measurement units within each system of units (standard and metric), including kilometers, meters, and centimeters; liters and milliliters; kilograms and grams; pounds and ounces; hours, minutes, and seconds. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. For example, know that one foot is 12 times as long as one inch. Express the length of a four-foot snake as 48 inches. Know that one meter is 100 times as long as one centimeter. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36)...

4.MD.2

Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money.

4.MD.A.2

Use the four operations to solve word problems and problems in real-world context involving distances, intervals of time (hr, min, sec), liquid volumes, masses of objects, and money, including decimals and problems involving fractions with like denominators, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using a variety of representations, including number lines that feature a measurement scale.

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4.MD.2.a

Include problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit.

Teaching Ideas/Resources

Websites/Resources:

- [Geometry in the Real World Project](#) (Scavenger Hunt to use for the project.to be attached asap)
- [K5 Learning pages for Geometry](#) (Two Dimensional figures)
- [K5 Learning pages for Geometry](#) (Lines and angles)
- [K5 Learning pages for measurement](#)
- [Measurement Conversion Puzzles](#)
- [Area of Triangle Relates to Rectangle Video](#)
- [Geoboard Activity](#)