

**SAU 50  
Grade 4  
Mathematics  
Measurement and Data**

**Measurement:** Solve problems using measurement and conversions from larger to smaller [units](#).

**Data:** represent and interpret data.

**SAU 50 District Competency:**

Students will independently use their learning to use measurement tools, units, and attributes to describe and compare objects, situations, or events, and to solve problems.

Students will independently use their learning to formulate questions, gather, record, and organize data to support decisions in real world situations.

**Essential Questions**

- Why do we measure things in our world?
- Why do I measure?
- Why do I need standardized units of measurement?
- How does what I measure influence how I measure?
- How exact does a measurement have to be?
- Why is data important and why do we collect it?
- How can information be organized?
- How is data used?

**Acquisition**

*Students will demonstrate the following to meet the standards.*

- I can recognize and draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines.
- I can identify and classify two-dimensional figures based on parallel or perpendicular lines, and angles.
- I can recognize right triangles as a category and identify right triangles.
- I can recognize and draw lines of symmetry for a figure.
- I can use a protractor to measure angles in whole-number degrees.
- I can sketch angles of specified degree.

- I can solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, by using an equation with a symbol for the unknown angle measure.

## Standards

### NH College and Career Ready Standards

#### ***Key to Standard Notation:***

**4.G.1: 4** (*grade level*) **G** (*domain: Geometry*) **MD** (*domain: Measurement and Data*) **1** (*number of the standard*)

#### **Geometry**

##### **Draw and identify lines and angles, and classify shapes by properties of their lines and angles.**

**4.G.1:** Draw points, lines, line segments, rays, angles (right, acute, obtuse) and perpendicular and parallel lines. Identify these in two-dimensional figures.

**4.G.2:** Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or 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.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.

#### **Measurement and Data**

##### **Geometric measurement: understand concepts of angle and measure angles.**

**4.MD.5:** Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement.

**4.MD.5a:** 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 angles.

**4.MD.5b:** 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 measures.

**4.MD.7:** Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, by using an equation with a symbol for the unknown angle measure.

[New Hampshire College and Career Ready Standards](#)

## References:

National Governors Association Center for Best Practices, Council of Chief State School Officers. (2010). *Common Core Standards for Mathematics* (United States, National Governors Association Center for Best Practices, Council of Chief State School Officers). Retrieved August 10, 2016, from [http://www.corestandards.org/assets/CCSSI\\_Math%20Standards.pdf](http://www.corestandards.org/assets/CCSSI_Math%20Standards.pdf)

Math is fun/definitions. (n.d.). Retrieved April 17, 2017, from <http://www.mathisfun.com/definitions>