

## G4 Playlist: Draw and Identify Lines and Angles

Aligns with *CCSS.MATH.CONTENT.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.

PREVIEW



## Objectives

In this module, you will learn and practice the following skills:

- Identify and differentiate between a line, a line segment, and a ray
- Draw a line, a line segment, and a ray
- Identify and differentiate between a right angle, an obtuse angle, and an acute angle
- Draw a right angle, an obtuse angle, and an acute angle
- Identify parallel and perpendicular lines
- Draw parallel and perpendicular lines
- Identify lines, line segments, rays, and angles in two dimensional geometric figures

Let's get started!

## Key Terms

- **Identifying** an object means to determine what it is
- A **plane** a flat surface that extends infinitely in all directions
- A **point** is an exact location represented by a small dot
- A **line** is a geometric object that is straight and infinitely long
- **Infinite** means never ending
- A **ray** is a portion of a line that has a definite starting point and goes off in a particular direction to infinity
- A **line segment** is a straight line which links two points without extending beyond them.
- An **angle** is two lines or rays diverging from a common point called the **vertex**
- **Diverge** means to extend in different directions from a common point
- **Intersect** means come together at a point
- A **right angle** measures 90 degrees
- An **obtuse angle** measures greater than 90 degrees



## Identifying and Drawing Lines, Line Segments, Rays, and Angles

(4.G.A.1)

**Identifying** an object means to determine what it is. A **plane** is a flat surface that extends infinitely in all directions. A **point** is an exact location represented by a small dot. A **line** is a geometric object that is straight and infinitely long. **Infinite** means never ending. A **ray** is a portion of a line that has a definite starting point and goes off in a particular direction to infinity. A **line segment** is a straight line which links two points without extending beyond them. An **angle** is two lines or rays diverging from a common point called the **vertex**. **Diverge** means to extend in different directions from a common point. **Intersect** means come together at a point. A **right angle** measures 90 degrees. An **obtuse angle** measures greater than 90 degrees. An **acute angle** measures less than 90 degrees. Lines are **parallel** if they lie in the same plane and are the same distance apart for their entire length. A line is **perpendicular** to another if meets and cross another at right angles. **Two-Dimensional figures** have length and width but no depth.

If your students...

**Misconception #1: Students think that right angles and 90 degree angles are different things.**

WATCH: Introduction to right angles

<https://www.opened.com/video/khan-academy-introduction-to-right-angles/183114>

**For extra practice with identifying and drawing lines, line segments, rays, and angles:**

ACTIVITY: Lines, line segments, and rays

<https://www.ixl.com/math/grade-4/lines-line-segments-and-rays>

ACTIVITY: Measuring with a protractor

<https://www.ixl.com/math/grade-4/measure-angles-with-a-protractor>

ACTIVITY: Parallel and perpendicular lines

<https://www.ixl.com/math/grade-4/parallel-perpendicular-intersecting>

ACTIVITY: Lines

<http://mrnussbaum.com/lines/>

