

Lesson 1.1: Building Blocks of Geometry

In this lesson you will:

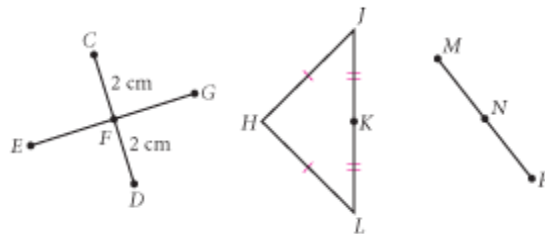
- learn about points, lines, and planes and how to represent them
- learn definitions of collinear, coplanar, line segment, congruent segments, midpoint, and ray
- learn geometric notation for lines, line segments, rays and congruence

Points, lines, and planes are the building blocks of geometry. It can be difficult to explain what points, lines, and planes are even though you may recognize them. Early mathematicians tried to define these terms. (See the B.C. comic on page 29 for an illustration of what they came up against.)

Technically these three terms remain undefined in the geometry world because it is impossible to define point, line, and plane without using words or phrases that themselves need definition. Even so, we will add these 3 terms to our dictionary using an “un-technical” definition.

*Also, add “collinear,” “coplanar,” “line segment,” “endpoint,” “congruent,” “midpoint,” “bisect,” and “ray” to your dictionary.

•Example 1: Study the diagrams below.



a.) Name each midpoint and the segment it bisects.

b.) Name all the congruent segments. Use the congruence symbol to write your answers.

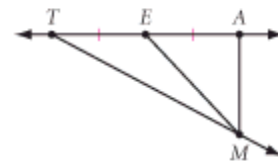
Investigation 1.1 “Mathematical Models”

In this lesson, you encountered many new geometry terms. In this investigation you will work as a group to identify models from the real world that represent these terms and to identify how they are represented in diagrams.

A.) Look around the classroom and identify at least one example of each of these terms:

- point:
- line:
- plane:
- line segment:
- congruent segments:
- midpoint of a segment:
- ray:

B.) Identify examples of these terms in the figure to the right.



- point:
- line:
- plane:
- line segment:
- congruent segments:
- midpoint of a segment:
- ray:

⇒ASSIGNMENT: _____