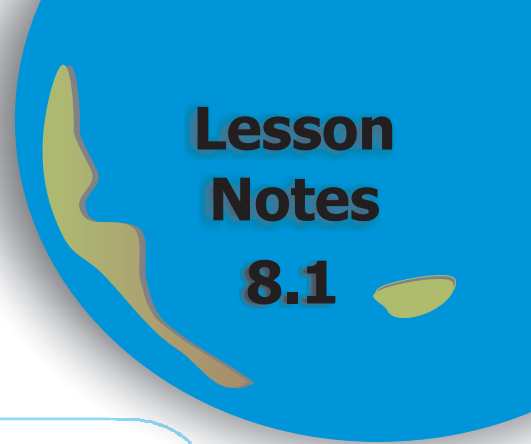


NAME \_\_\_\_\_

Module 8 Points, Lines, Angles, and Triangles  
Lesson 1 Language of Geometry



# Lesson Notes

## 8.1

### Lesson Objectives

- Identify points, lines, planes, rays, and segments.
- Define and identify an angle.
- Label parts of an angle: vertex, rays, interior, and exterior.

### Subtopic 1 Basic Terms of Geometry

Point

- A location
- Has no size
- Represented by a small dot
- Named with a capital letter
- Used to make all other geometric figures

Line

- An infinite set of points extending in opposite directions without end
- Named by two points on the line

OR

- Named by a lower-case letter

Points on the same line are collinear.

Plane

- A flat surface
- Extends infinitely in all directions
- Has no thickness
- Named by a capital italicized letter

OR

- Named by three noncollinear points

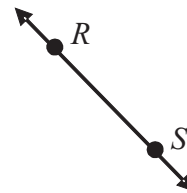
Points and lines in the same plane are coplanar.

A line segment is a part of a line that has two endpoints.

A ray is a part of a line that has one endpoint and extends infinitely in one direction.

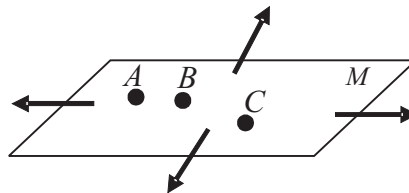
- 1** Write all the ways to name the line using symbols.

$\overleftrightarrow{RS}$  or  $\overleftrightarrow{SR}$



- 2** Write all the ways to name the plane.

Plane  $M$  or plane  $ABC$



**Tell whether the statement is true or false.**

- 3** A point's length can be measured.

**False**

- 4** A line is made up of two points.

**False**

**Subtopic 2**

**Angles**

An angle is made up of two distinct rays that have a common endpoint.

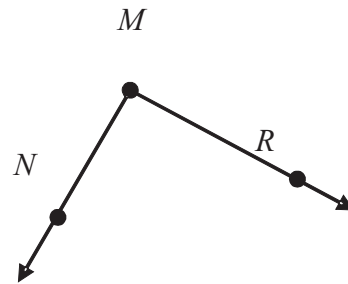
- The two rays are the sides of the angle.
- The common endpoint is the vertex.
- An angle can be named by its vertex.
- An angle can be named using three points: a point on one side, the vertex, and a point on the other side.
- The vertex is always the middle letter.
- An angle can be named using a number.

An angle separates a plane into three parts:

- Points that make up the angle
- Points in the interior of the angle
- Points in the exterior of the angle

**5** Name the vertex and sides of the angle.

**Vertex:**  $M$   
**Sides:**  $\overrightarrow{MN}$ ,  $\overrightarrow{MR}$



**6** Tell whether each point shown lies on the angle, in the angle's interior, or in the angle's exterior.

**On the angle:**  $T, M, B$   
**Interior:**  $R, L$   
**Exterior:**  $G, Q$

