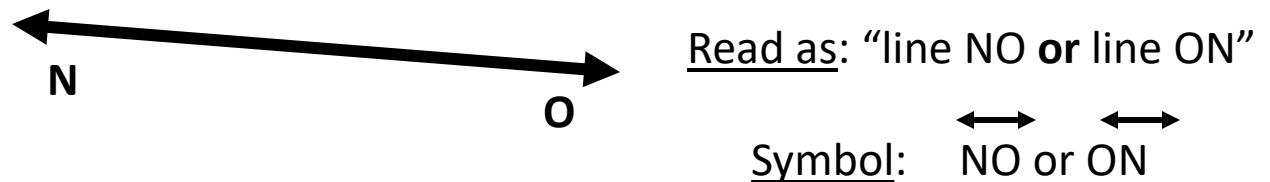# 9.1 Introduction to Geometry

Identifying lines, rays, and segments
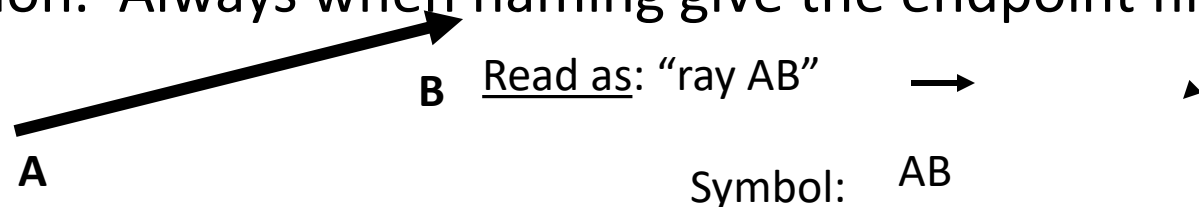
VOCABULARY

Point – usually labeled with an uppercase letter. Describes a specific location in space.

Line – points that extend without end in two opposite directions

Read as: "line NO **or** line ON"

N   O

Symbol: NO or ON

Ray – has 1 endpoint and extends without end in *one*

direction. Always when naming give the endpoint first.

B   Read as: "ray AB"

A

Symbol: AB

Identifying lines, rays, and segments continued….

Segment – a piece of a line which has two endpoints

<u>Read as</u>: "line segment BE or line segment EB"

●————————————●
B   **E**

<u>Symbol:</u>   ▬ ▬
BE or EB

NOTE: You may have the points at the end of the segment or without.

Intersecting lines – two different lines that meet at a point

T   **Q**
          S

P
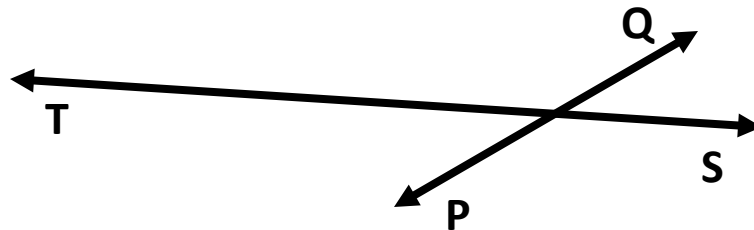
"Line TS intersects with line PQ"

Identifying lines, rays, and segments continued….

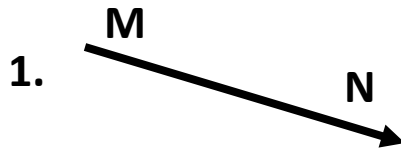**Parallel lines** – two different lines that will never intersect no matter how far they extend.

C

D
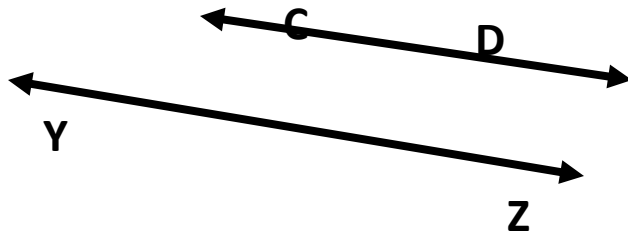
"Line CD is parallel to line YZ."

Y

Z

$\overleftrightarrow{CD}$ // $\overleftrightarrow{YZ}$

Let's Do Some Examples!

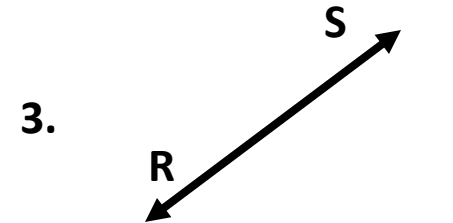**Identify and name the *line*, ray, or *segment*.**

1.

M

N

ray

$\overrightarrow{MN}$ **or** $\overleftarrow{NM}$

2.

Q   P

line segment

$\overline{QP}$ or $\overline{PQ}$
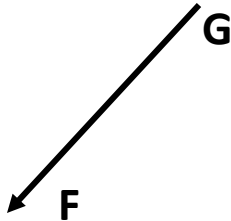
3.

S

R

line

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

Now You Try!

Identify and name the *line*, ray, or *segment*.

G

F

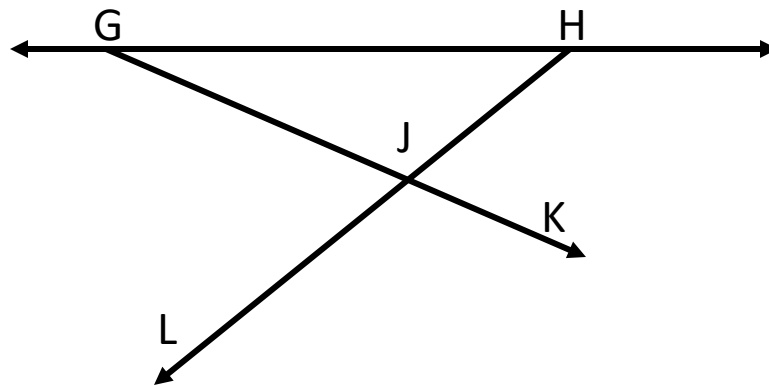ray $\overrightarrow{GF}$ or $\overleftarrow{FG}$

H   **J**

line $\overleftrightarrow{HJ}$ or $\overleftrightarrow{JH}$

K   **L**

segment $\overline{KL}$ or $\overline{LK}$

Now You Try Continued

G   H

J

K

L

1. Name 2 rays.   HL or GK or JG or JL or JK or JH

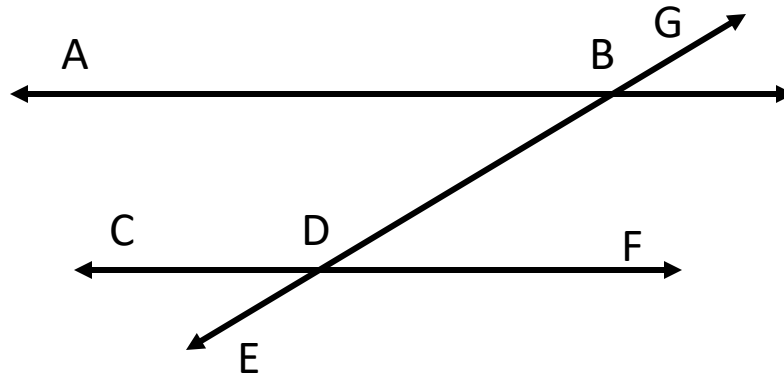2. Name 2 segments that have   GH and GJ
   G as an endpoint.

3. Name a line.   GH

4. Name 3 points.   Any 3 that includes L or J or K or H or G

Now You Try Continued

1. Name a pair of intersecting lines. AB and EG or CF and EG

2. Name a pair of parallel lines. AB and CF

3. Name DB and BA another way. BD and AB