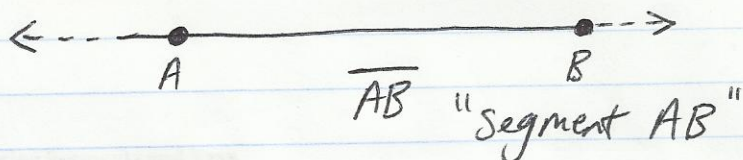


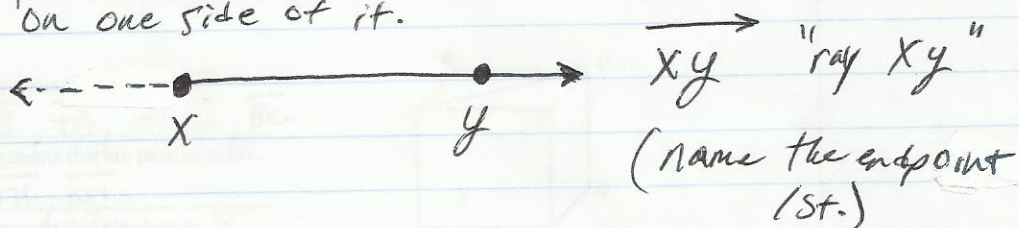
1-4 Segments, Rays, Parallel Lines and Planes

Segment: part of a line w/ two endpoints

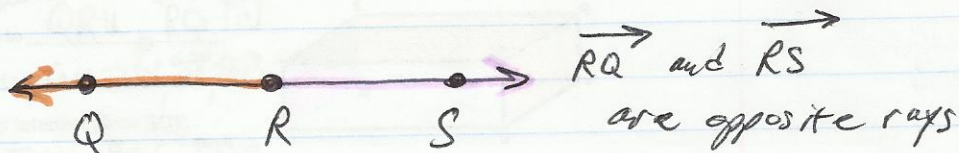


AB refers to the length of \overline{AB} , or the distance b/t endpoints.

Rays: part of a line w/ one endpoint and all points on one side of it.



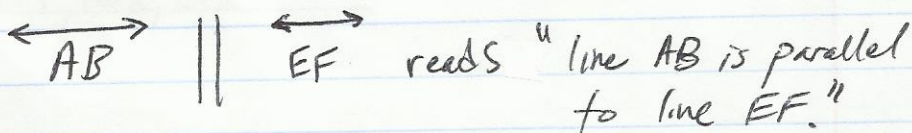
Opposite Rays: two colinear rays w/ same endpoint.



Ex 1, 2

Parallel Lines: coplanar; don't intersect.

Skew Lines: non-coplanar; not parallel; don't intersect.



Ex. 3 Lines that intersect may or may not be coplanar.

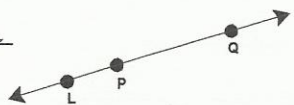
Parallel Planes = planes that do not intersect.
 * a line and a plane that don't intersect are also parallel.

Ex 4, 5

Example 1: Naming Segments and Rays

Name the segments and rays in the figure at the right.

- 3 SEGMENTS are: LP, PQ, LQ
- 3 possible RAYS are: PL, PQ, LQ



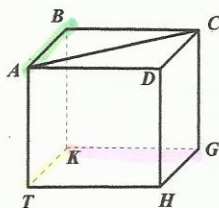
Example 2:

\overleftrightarrow{LP} and \overleftrightarrow{PL} form a line.

Are they opposite rays? Explain: no; they don't have same endpoint.

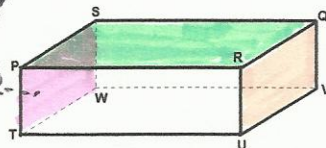
Example 3:

- Name all segments that intersect \overline{AB} .
 \overline{CA} , \overline{CB} , \overline{TA} , \overline{KB} , \overline{DA} , \overline{BC}
- Name all segments that are parallel to \overline{KG} .
 \overline{BC} , \overline{TH} , \overline{AD}
- Name all segments that are skew to \overline{TK} .
 \overline{AC} , \overline{BC} , \overline{AD} , \overline{DH} , \overline{CG}



Example 4:

- Plane PTW is parallel to plane QRU , RQ , UV
- Plane SQR is parallel to plane TUV , PS , RQ
- Identify all planes that intersect plane RQV .
planes SQR , TUV , PRU , SQV



Example 5:

- Name two segments that intersect \overline{QU} .
 \overline{QR} , \overline{TU}
- Name any segments parallel to \overline{XY} .
 \overline{TS}
- Name all segments skew to \overline{VW} .
 \overline{TY} , \overline{SX} , \overline{UZ} , \overline{FS} , \overline{RS} , \overline{QU} , \overline{UT}
- Name all planes that intersect plane STX .
 UTS , UTY , RSX , ZYX

