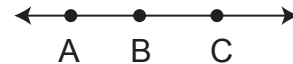


Segment:

A segment consists two endpoints.



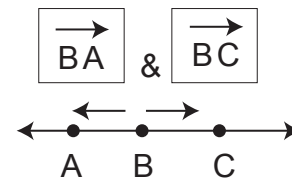
Ray:

A ray consists one end point and extends in one direction without an endpoint.



Opposite Rays:

Opposite rays have the same endpoints and extend in opposite directions.



Distance:

The length between two points.



1. Does the symbol represent a line, segment, ray, or length?

- a. $\overline{PQ}$ b. $\overrightarrow{PQ}$ c. $\overleftrightarrow{PQ}$ d. PQ

2. How many endpoints does a segment have?
a ray? a line?

3. Is $\overline{AB}$ the same as $\overline{BA}$? 4. Is $\overrightarrow{AB}$ the same as $\overrightarrow{BA}$?

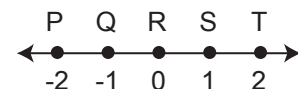
5. Is $\overleftrightarrow{AB}$ the same as $\overleftrightarrow{BA}$? 6. Is AB the same as BA?

7. Find the distance: a. RS b. RQ c. PT

8. Name the ray opposite to $\overrightarrow{SP}$.



Exs. 3-6



Exs. 7-8

2-13 Congruent Complements Theorem

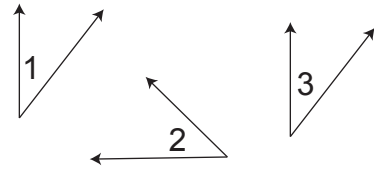
BASIC PROOF

2

Congruent Complements Theorem:

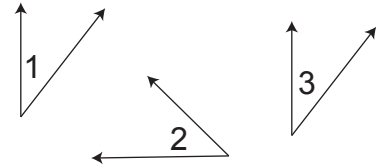
Angles complementary to the same angle or to congruent angles are congruent.

If $\angle 1$ and $\angle 3$ are complementary to $\angle 2$,
then $\angle 1 \cong \angle 3$.



1. Given: $\angle 1$ and $\angle 2$ are complementary.
 $\angle 2$ and $\angle 3$ are complementary.

Prove: $\angle 1 \cong \angle 3$



Proof:

Statements	Reasons
1.	1. Given
2.	2. Def. of complementary $\angle$ s.
3.	3.
4. $m\angle 2 = m\angle 2$	4.
5. $m\angle 1 = m\angle 3$	5.
6.	6. Def. of congruent angles

Remember!

Def. of congruent angles:

If $m\angle A = m\angle B$, then $\angle A \cong \angle B$.

If $\angle A \cong \angle B$, then $m\angle A = m\angle B$.