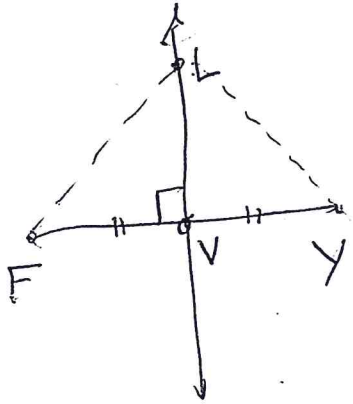


Prove: Every point on the perpendicular bisector of a segment is equidistant from the endpoints of the segment.



Given: ~~seg~~ \overline{FY} with $\overleftrightarrow{LV} \perp \overline{FY}$,
 V is the midpoint of \overline{FY} .

Show: $\overline{FL} \cong \overline{YL}$ (L is any point on the line)

What

 $\overleftrightarrow{LV} \perp \overline{FY}$
 V is the midpoint of \overline{FY}
 ?
 ?
 $\triangle FVL \cong \triangle YVL$

Why

?

?

Def of midpoint

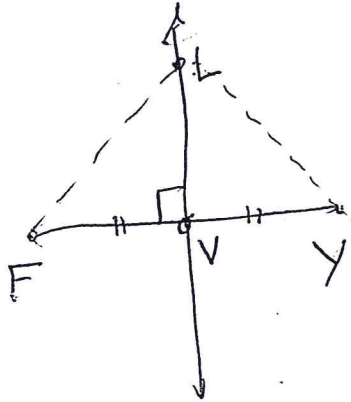
Shared Side

?

Corresponding parts are congruent

Therefore, any point on the \perp bisector of a segment is equidistant from the endpoints of the segment.
 (C-5) is now a theorem.

Prove: Every point on the perpendicular bisector of a segment is equidistant from the endpoints of the segment.



Given: ~~seg~~ \overline{FY} with $\overleftrightarrow{LV} \perp \overline{FY}$,
 V is the midpoint of \overline{FY} .

Show: $\overline{FL} \cong \overline{YL}$ (L is any point on the line)

What

$\overleftrightarrow{LV} \perp \overline{FY}$
 V is the midpoint of \overline{FY}
 $\overline{FV} \cong \overline{YV}$
 $\overline{LV} \cong \overline{LV}$
 $\triangle FVL \cong \triangle YVL$
 $\overline{FL} \cong \overline{YL}$

Why

? Given
 ? Given
 Def of midpoint
 Shared Side
 ? **SAS**

Corresponding parts are congruent

Therefore, any point on the \perp bisector of a segment is equidistant from the endpoints of the segment.
 (C-5) is now a theorem.