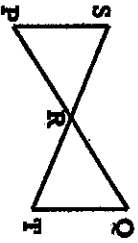


4-4: Using Congruent Triangles: CPCTC Part 2

Examples/Classwork Activity

Midpoint

Given: R is the midpoint of \overline{PQ} & \overline{ST}

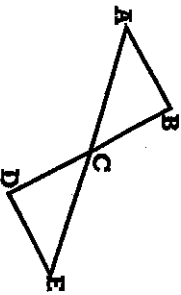


Prove: $\angle P \cong \angle Q$

Statement	Reason
1. R is the midpoint of \overline{PQ}	1. Given
2.	2.
3. R is the midpoint of \overline{ST}	3. Given
4.	4.
5.	5.
6.	6.
7.	7.

Perpendicular

Given: $\overline{BD} \perp \overline{AB}$, $\overline{BD} \perp \overline{DE}$, & $\overline{BC} \cong \overline{CD}$

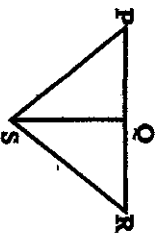


Prove: $\overline{AC} \cong \overline{EC}$

Statement	Reason
1. $\overline{BD} \perp \overline{AB}$	1. Given
2.	2.
3. $\overline{BD} \perp \overline{DE}$	3. Given
4.	4.
5. $\overline{BC} \cong \overline{CD}$	5. Given
6.	6.
7.	7.
8.	8.

Perpendicular Bisector

Given: \overline{SQ} is a perpendicular bisector of \overline{PR}

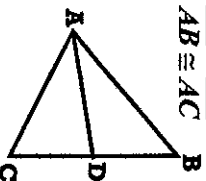


Prove: $\overline{PS} \cong \overline{RS}$

Statement	Reason
1. \overline{SQ} is a perpendicular bisector of \overline{PR}	1. Given
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.

Angle Bisector

Given: \overline{AD} bisects $\angle BAC$, $\angle B \cong \angle C$



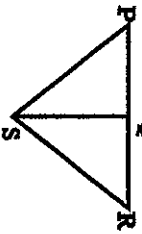
Prove: $\overline{AB} \cong \overline{AC}$

Statement	Reason
1. \overline{AD} bisects $\angle BAC$	1. Given
2.	2.
3. $\angle B \cong \angle C$	3. Given
4.	4.
5.	5.
6.	6.

Class Work

4. Given: \overline{SQ} is a perpendicular bisector of \overline{PR}

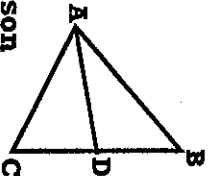
Prove: $\overline{PS} \cong \overline{RS}$



Statement	Reason
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.

5. Given: \overline{AD} bisects $\angle BAC$, $\angle B \cong \angle C$

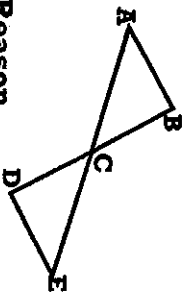
Prove: $\overline{AB} \cong \overline{AC}$



Statement	Reason
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.

6. Given: $\overline{BD} \perp \overline{AB}$, $\overline{BD} \perp \overline{DE}$, & $\overline{BC} \cong \overline{CD}$

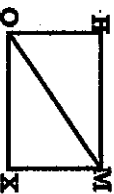
Prove: $\overline{AC} \cong \overline{EC}$



Statement	Reason
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.
8.	8.

7. Given: $\angle H$ & $\angle X$ are right angles, $\overline{HQ} \cong \overline{XM}$

Prove: $\angle HMQ \cong \angle XQM$

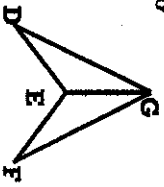


Statement	Reason
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.

Write a two-column proof.

1. Given: $\angle D \cong \angle F$, $\angle DGE \cong \angle FGE$

Prove: $\overline{FG} \cong \overline{DG}$



Statement	Reason
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

2. Given: $\overline{MR} \cong \overline{RP}$, $\angle M \cong \angle P$

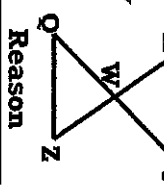
Prove: $\overline{NR} \cong \overline{QR}$



Statement	Reason
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

3. Given: \overline{QY} & \overline{XZ} bisect each other.

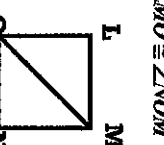
Prove: $\angle Q \cong \angle Y$



Statement	Reason
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.

4. Given: $\angle OLM$ & $\angle MNO$ are right angles, $\angle LMO \cong \angle NOM$

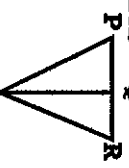
Prove: $\overline{LO} \cong \overline{NM}$



Statement	Reason
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

5. Given: Q is the midpoint of \overline{PR} & $\overline{RS} \cong \overline{RS}$

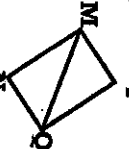
Prove: $\angle P \cong \angle R$



Statement	Reason S
1. Q is the midpoint of \overline{PR}	1. Given
2.	2.
3. $\overline{RS} \cong \overline{RS}$	3. Given
4.	4.
5.	5.
6.	6.

6. Given: $\overline{MN} \perp \overline{NO}$, $\overline{MP} \perp \overline{PO}$, $\angle PMQ \cong \angle NOM$

Prove: $\overline{MN} \cong \overline{OP}$



Statement	Reason N
1. $\overline{MN} \perp \overline{NO}$	1. Given
2.	2.
3. $\overline{MP} \perp \overline{PO}$	3. Given
4.	4.
5. $\angle PMQ \cong \angle NOM$	5. Given
6.	6.
7.	7.
8.	8.

7. Given: \overline{KH} bisects $\angle GKI$ & $\angle GHI$

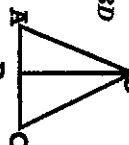
Prove: $\overline{GK} \cong \overline{KI}$



Statement	Reason
1. \overline{KH} bisects $\angle GKI$	1. Given
2.	2.
3. \overline{KH} bisects $\angle GHI$	3. Given
4.	4.
5.	5.
6.	6.
7.	7.

8. Given: \overline{BD} is a perpendicular bisector to \overline{AC}

Prove: $\angle ABD \cong \angle CBD$



Statement	Reason
1. \overline{BD} is a perpendicular bisector to \overline{AC}	1. Given
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.