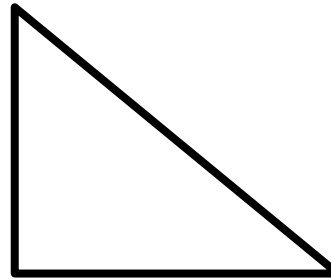
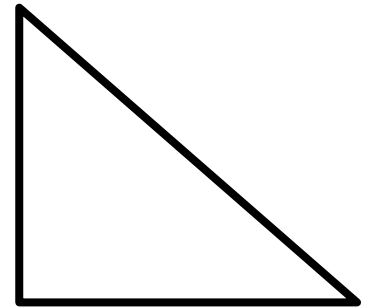


TRIANGLES

Congruence Proofs



\cong

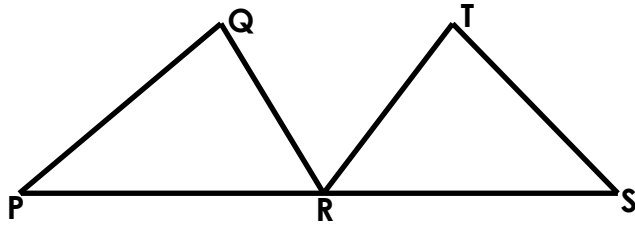


Created by:

SSS PROOF #1

Given: $\overline{PQ} \cong \overline{ST}$, $\overline{QR} \cong \overline{TR}$, R is the midpoint of \overline{PS}

prove: $\triangle PQR \cong \triangle STR$



Statements	Reasons

$\overline{PQ} \cong \overline{ST}$

Def. of Midpoint

$\overline{QR} \cong \overline{TR}$

R is the midpoint of \overline{PS}

Given

$\overline{PR} \cong \overline{SR}$

Given

SSS

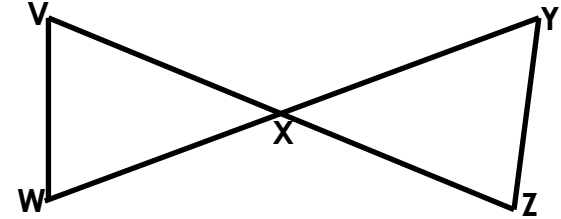
Given

$\triangle PQR \cong \triangle STR$

CPCTC PROOF #4

Given: $\overline{WV} \parallel \overline{YZ}$, X is the midpoint of \overline{WY} ,

prove: $\angle WVX \cong \angle YZX$



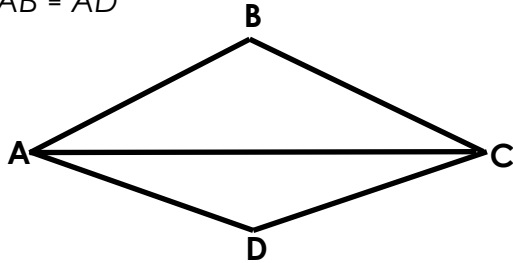
Statements	Reasons



CPCTC PROOF #3

Given: \overline{AC} bisects $\angle BCD$, $\angle ABC \cong \angle ADC$

prove: $\overline{AB} \cong \overline{AD}$

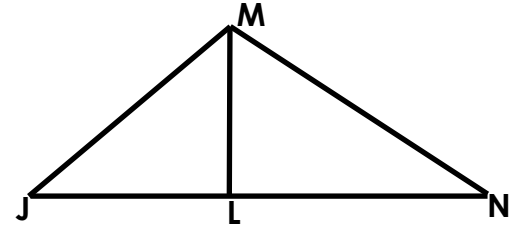


Statements	Reasons

SSS PROOF #2

Given: L is the midpoint of \overline{JN} , $\overline{JM} \cong \overline{NM}$,

prove: $\triangle JLM \cong \triangle NLM$

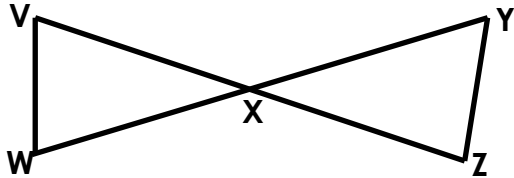


Statements	Reasons

SAS PROOF #1

Given: X is the midpoint of \overline{VZ} , X is the midpoint of \overline{WY}

prove: $\triangle VWX \cong \triangle ZYX$



Statements	Reasons

Def. of Midpoint

Def. of Midpoint

$\overline{WX} \cong \overline{XY}$

$\angle WXV \cong \angle YXZ$

Vertical Angles

X is the midpoint of \overline{VZ}

Given

$\overline{VX} \cong \overline{XZ}$

X is the midpoint of \overline{WY}

SAS

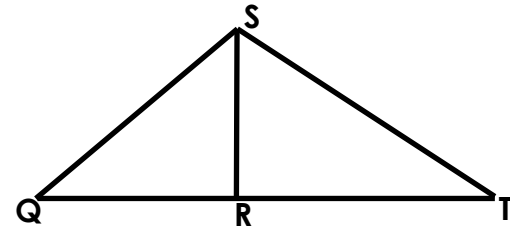
Given

$\triangle VWX \cong \triangle ZYX$

CPCTC PROOF #2

Given: $\overline{QS} \cong \overline{TS}$, R is the midpoint of \overline{QT}

prove: $\angle RQS \cong \angle RTS$

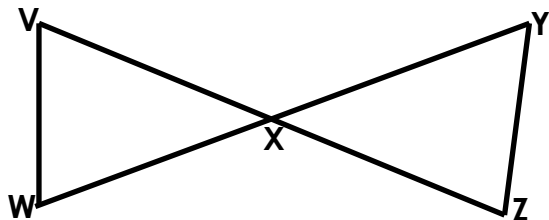


Statements	Reasons

CPCTC PROOF #1

Given: X is the midpoint of \overline{VZ} , X is the midpoint of \overline{WY}

prove: $\angle XVW \cong \angle XZY$



Statements	Reasons

Given

Def. of Midpoint

$\overline{VX} \cong \overline{ZX}$

Def. of Midpoint

$\angle XVW \cong \angle XZY$

X is the midpoint of \overline{VZ}

Given

$\angle WXV \cong \angle YXZ$

$\overline{WX} \cong \overline{YX}$

$\triangle VWX \cong \triangle ZYX$

Vertical Angles

X is the midpoint of \overline{WY}

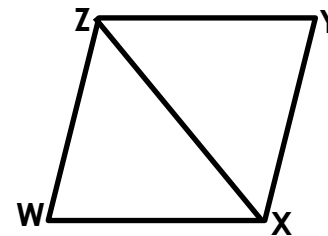
CPCTC

SAS

SAS PROOF #2

Given: $\overline{XW} \cong \overline{XY}$, \overline{XZ} bisects $\angle WXY$

prove: $\triangle WXZ \cong \triangle YXZ$

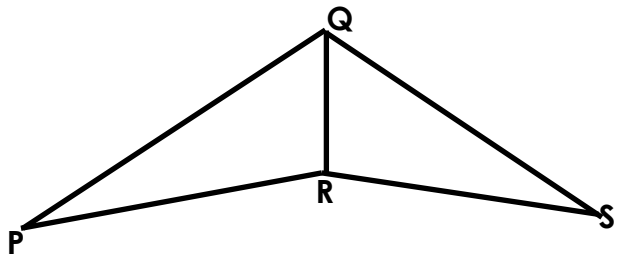


Statements	Reasons

ASA PROOF #1

Given: \overline{QR} bisects $\angle PQS$, $\angle PRQ \cong \angle SRQ$

prove: $\triangle PQR \cong \triangle SQR$



Statements	Reasons

$\overline{QR} \cong \overline{QR}$

Given

$\angle PQR \cong \angle SQR$

Def. of Angle Bisector

Given

\overline{QR} bisects $\angle PQS$

Reflexive Property

$\angle PRQ \cong \angle SRQ$

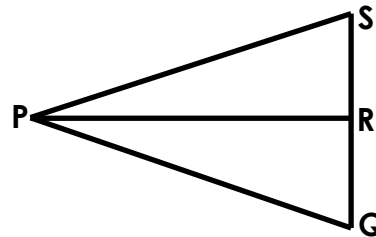
ASA

$\triangle PQR \cong \triangle SQR$

HL PROOF #2

Given: $\overline{PR} \perp \overline{SQ}$, $\overline{PQ} \cong \overline{PS}$

prove: $\triangle PRQ \cong \triangle PRS$



Statements	Reasons

whiteblock

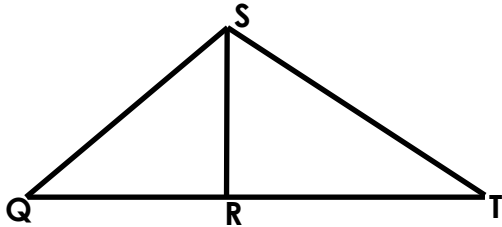
whit

whiteblock

AAS PROOF #1

Given: \overline{SR} bisects $\angle QST$, $\angle SQR \cong \angle STR$

prove: $\triangle QSR \cong \triangle TSR$



Statements	Reasons

$\angle QSR \cong \angle TSR$

Reflexive Property

Given

$\triangle QSR \cong \triangle TSR$

Given

$\angle SQR \cong \angle STR$

\overline{SR} bisects $\angle QST$

AAS

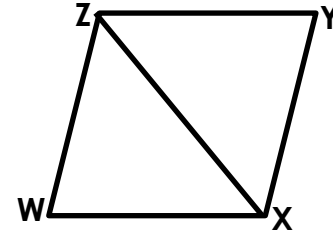
Def. of Angle Bisector

$\overline{SR} \cong \overline{SR}$

AAS PROOF #2

Given: $\angle XWZ \cong \angle XYZ$, \overline{XZ} bisects $\angle WXY$

prove: $\triangle XWZ \cong \triangle XYZ$



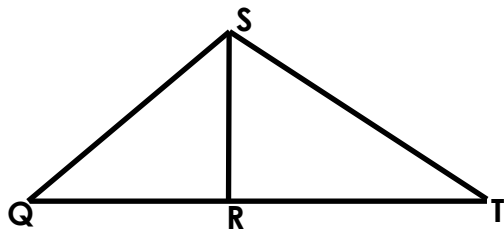
Statements	Reasons



HL PROOF #1

Given: $\triangle QSR$ and $\triangle TSR$ are right triangles, $\overline{QS} \cong \overline{TS}$

prove: $\triangle QSR \cong \triangle TSR$



Statements	Reasons

$\overline{QS} \cong \overline{TS}$

HL

Given

$\triangle QSR$ and $\triangle TSR$ are right triangles

Given

Reflexive Property

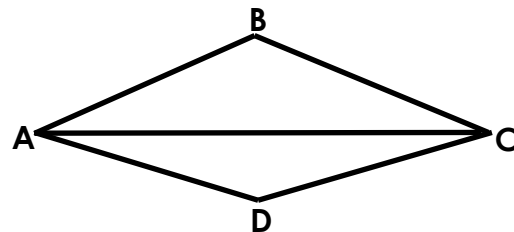
$\triangle QSR \cong \triangle TSR$

$\overline{SR} \cong \overline{SR}$

ASA PROOF #2

Given: \overline{AC} bisects $\angle BAD$, \overline{AC} bisects $\angle BCD$

prove: $\triangle BAC \cong \triangle DAC$



Statements	Reasons

whiteblock

whiteblock