Name

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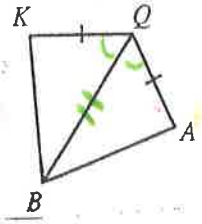
5.3 5.5-5.6 Proving △'s ≅

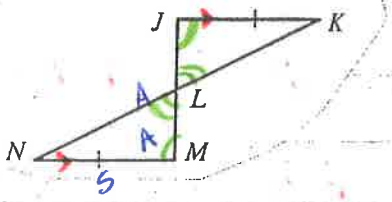
Put Givens all on 1 line.

Given: $\overline{QK} \cong \overline{QA}$; $\overrightarrow{QB}$ bisects $\angle KQA$
Prove: $\triangle BQK \cong \triangle BQA$



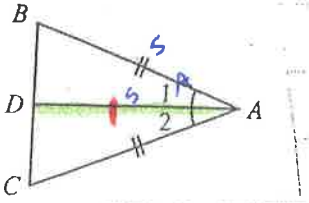
1. $\overline{QK} \cong \overline{QA}$, $\overrightarrow{QB}$ bisects $\angle KQA$	1. Given
2. $\angle KQB \cong \angle AQB$	2. Def. Angle Bisector
3. $\overline{BQ} \cong \overline{BQ}$	3. Reflexive
4. $\triangle BQK \cong \triangle BQA$	4. SAS

Given: $\overline{KJ} \parallel \overline{NM}$; $\overline{KJ} \cong \overline{NM}$
Prove: $\triangle KJL \cong \triangle NML$



1. $\overline{KJ} \parallel \overline{NM}$, $\overline{KJ} \cong \overline{NM}$	1. Given
2. $\angle LJK \cong \angle LMN$	2. Alternate Interior $\angle$s $\cong$
3. $\angle JLK \cong \angle MLN$	3. Vertical $\angle$s $\cong$
4. $\triangle KJL \cong \triangle NML$	4. AAS

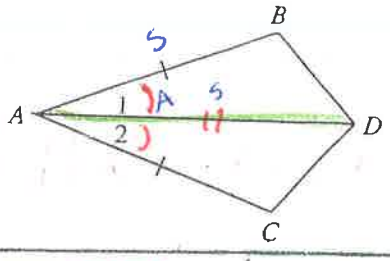
Given: $\overline{AB} \cong \overline{AC}$
$\angle 1 \cong \angle 2$
Prove: $\triangle ABD \cong \triangle ACD$



1. $\overline{AB} \cong \overline{AC}$, $\angle 1 \cong \angle 2$	1. Given
2. $\overline{AD} \cong \overline{AD}$	2. Reflexive
3. $\triangle ABD \cong \triangle ACD$	3. SAS

Given: $\overline{AD}$ bisects $\angle BAC$.
$\overline{AB} \cong \overline{AC}$

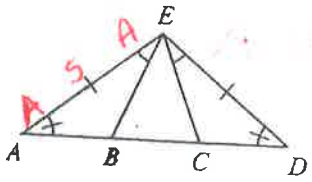
Prove: $\triangle ABD \cong \triangle ACD$



1. $\overline{AD}$ bisects $\angle BAC$, $\overline{AB} \cong \overline{AC}$	1. Given
2. $\angle 1 \cong \angle 2$	2. Def. Angle Bisector
3. $\overline{AD} \cong \overline{AD}$	3. Reflexive
4. $\triangle ABD \cong \triangle ACD$	4. SAS

Given: $\overline{AE} \cong \overline{DE}$, $\angle A \cong \angle D$
$\angle AEB \cong \angle DEC$

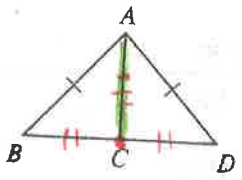
Prove: $\triangle AEB \cong \triangle DEC$



1. $\overline{AE} \cong \overline{DE}$, $\angle A \cong \angle D$, $\angle AEB \cong \angle DEC$	1. Given
2. $\triangle AEB \cong \triangle DEC$	2. ASA

Given: $\overline{AB} \cong \overline{AD}$
C is the midpoint of $\overline{BD}$.

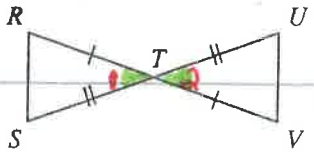
Prove: $\triangle ABC \cong \triangle ADC$



1. $\overline{AB} \cong \overline{AD}$, C is midpoint $\overline{BD}$	1. Given
2. $\overline{BC} \cong \overline{CD}$	2. Def. Midpoint
3. $\overline{AC} \cong \overline{AC}$	3. Reflexive
4. $\triangle ABC \cong \triangle ADC$	4. SSS

Given: $\overline{RT} \cong \overline{VT}$, $\overline{ST} \cong \overline{UT}$

Prove: $\triangle RST \cong \triangle VUT$



1. $\overline{RT} \cong \overline{VT}$, $\overline{ST} \cong \overline{UT}$	1. Given
2. $\angle 1 \cong \angle 2$	2. Vertical Angles
3. $\triangle RST \cong \triangle VUT$	3. SAS