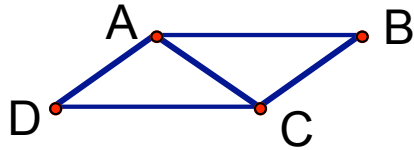


Chapter 4: Proofs with Triangles
Lesson 4-4: AAS , HL
Homework

Name _____

#1

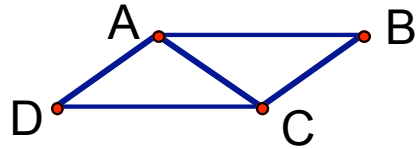
Given: $\angle B \cong \angle D$
 $\overline{BC} \parallel \overline{DA}$
 Prove: $\triangle ABC \cong \triangle CDA$



STATEMENTS	REASONS

#2

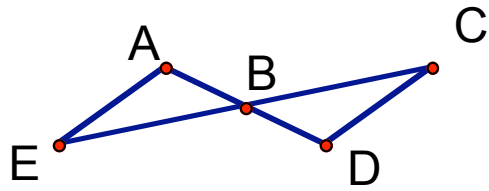
Given: $\angle B \cong \angle D$
 $\angle BAC \cong \angle DCA$
 Prove: $\triangle ABC \cong \triangle CDA$



STATEMENTS	REASONS

#'

Given: $\overline{AE} \parallel \overline{DC}$
B is the midpoint of \overline{AD}
Prove: $\triangle ABE \cong \triangle CBD$

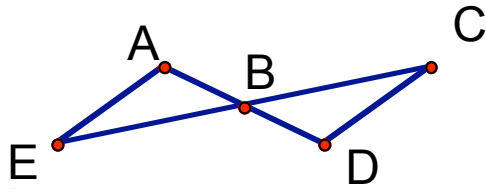


STATEMENTS

REASONS

#(

Given: $\overline{AE} \parallel \overline{DC}$
 $\overline{AE} \cong \overline{DC}$
Prove: $\triangle ABE \cong \triangle CBD$

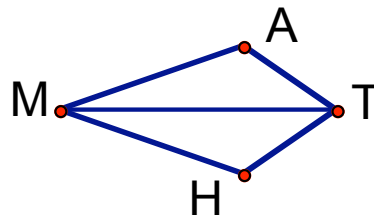


STATEMENTS

REASONS

#)

Given: $\angle A \cong \angle H$
 $\angle ATM \cong \angle HTM$
Prove: $\triangle MAT \cong \triangle MHT$

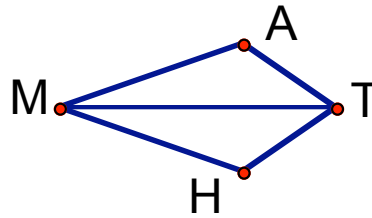


STATEMENTS

REASONS

#*

Given: $\angle A \cong \angle H$
 \overline{MT} bisects $\angle ATH$
Prove: $\triangle MAT \cong \triangle MHT$

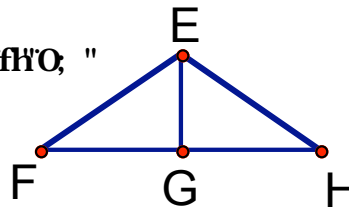


STATEMENTS

REASONS

#+

Given: $\triangle EFG$ $\triangle EHG$ are rt. \triangle s $\angle H$ \cong $\angle F$; "
 $\overline{EF} \cong \overline{EH}$
Prove: $\triangle FGE \cong \triangle HGE$

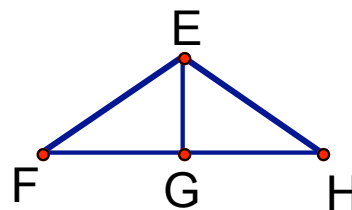


STATEMENTS

REASONS

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Given: $\overline{EG} \perp \overline{FH}$
 $\overline{EF} \cong \overline{EH}$
Prove: $\triangle FGE \cong \triangle HGE$

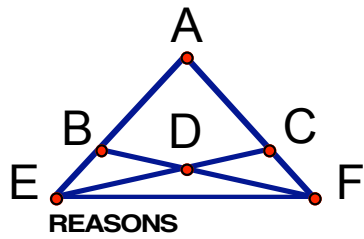


STATEMENTS

REASONS

#-

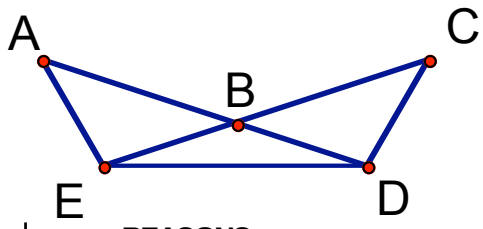
Given: $\overline{AC} \cong \overline{AB}$
 $\angle AEC \cong \angle AFB$
Prove: $\triangle ACE \cong \triangle ABF$



STATEMENTS	REASONS

#1\$

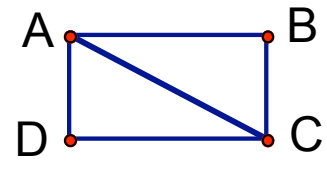
Given: $\angle A \cong \angle C$
 $\angle ADE \cong \angle CED$
Prove: $\triangle AED \cong \triangle CDE$



STATEMENTS	REASONS

#1%

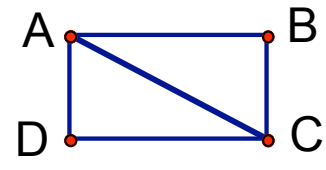
Given: $\overline{AB} \perp \overline{BC}$
 $\overline{CD} \perp \overline{DA}$
 $\overline{AD} \cong \overline{CB}$
Prove: $\triangle ADC \cong \triangle CBA$



STATEMENTS	REASONS

#1&

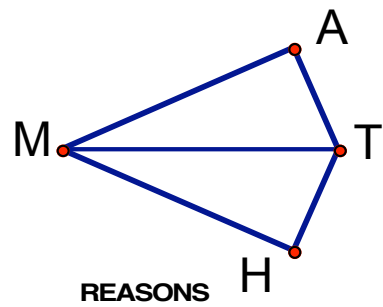
Given: $\triangle ADC \cong \triangle CBA$ rt. \triangle s
 $\overline{AB} \cong \overline{CD}$
Prove: $\triangle ADC \cong \triangle CBA$



STATEMENTS	REASONS

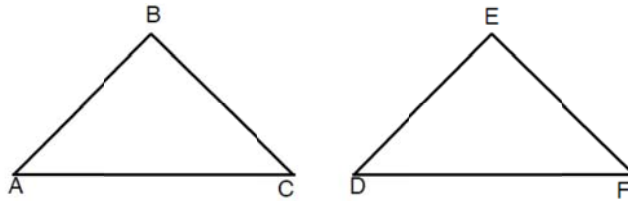
#1'

Given: $\angle A, \angle H$ are rt. \angle s
 $\overline{AT} \cong \overline{HT}$
Prove: $\triangle MAT \cong \triangle MHT$



STATEMENTS	REASONS

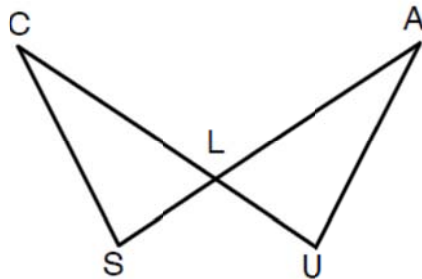
Name the third piece of information needed for the triangles to be congruent. Place your answer in the space provided.



Use this diagram for problem #14.

14. Given: $\overline{AC} \cong \overline{DF}$
 $\angle C \cong \angle F$ 14.

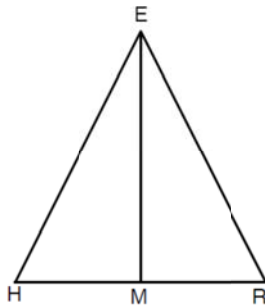
Prove: $\triangle ABC \cong \triangle DEF$ by AAS



Use this diagram for problem #15.

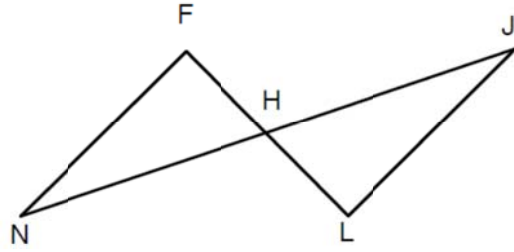
15. Given: $\overline{CL} \cong \overline{AL}$ 15.

Prove: $\triangle CLS \cong \triangle ALU$ by AAS



Use this diagram for problem #16 - 17.

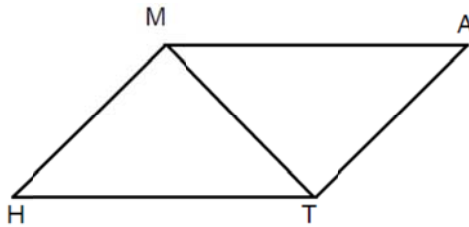
16. Given: $\overline{EM} \perp \overline{HR}$ 16.
 Prove: $\triangle HEM \cong \triangle REM$ by AAS
17. Given: $\overline{EM} \perp \overline{HR}$ 17.
 Prove: $\triangle HEM \cong \triangle REM$ by HL



Use this diagram for problem #18.

18. Given: H is the midpoint of FL
 Prove: $\triangle FHN \cong \triangle LNJ$ by AAS

18.



Use this diagram for problem #18.

19. Given: $\angle AMT \cong \angle HTM$
 Prove: $\triangle AMT \cong \triangle HTM$ by AAS

19.