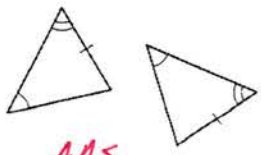
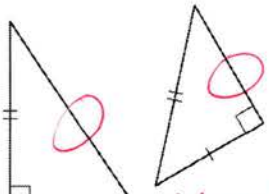
Name Answers Date

4.4 – Triangle Congruence Using ASA, AAS & HL

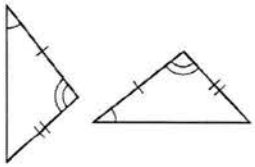
Decide whether enough information is given to prove that the triangles are congruent using either SSS, HL, ASA, or AAS. If there is not enough information to prove the triangles congruent, write *not enough information.*

1) 

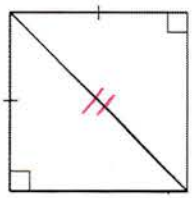
AAS

2) 

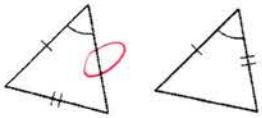
Not enough info

3) 

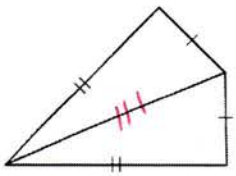
ASA or SAS

4) 

HL

5) 

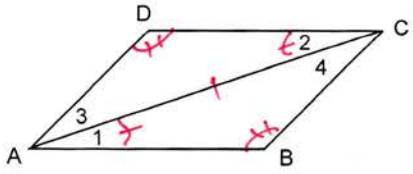
Not enough info

6) 

SSS

7) Use the information to complete the following flow chart proof.

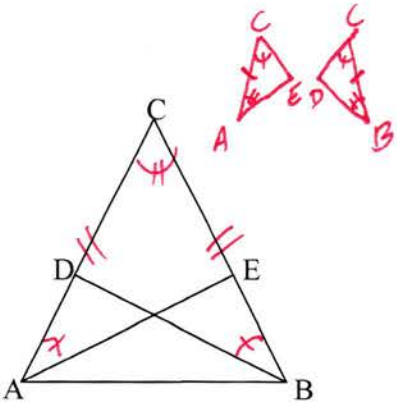
1. $\angle 1 \cong \angle 2$
2. Given
3. $\angle B \cong \angle D$
4. Given
5. $\overline{AC} \cong \overline{AC}$
6. Ref. Prop.
7. $\triangle ADC \cong \triangle CBA$
8. AAS



Given: $\angle 1 \cong \angle 2$, $\angle B \cong \angle D$
Prove: $\triangle ADC \cong \triangle CBA$

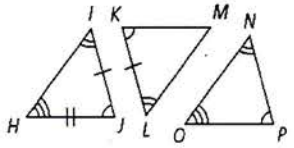
8) Use the information to complete the following flow chart proof.

1. $\overline{AC} \cong \overline{BC}$
2. Given
3. $\angle CAE \cong \angle CBD$
4. Given
5. $\angle C \cong \angle C$
6. Ref. Prop
7. $\triangle CAE \cong \triangle CBD$
8. ASA

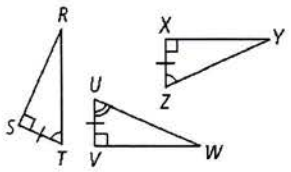


Given: $\overline{AC} \cong \overline{BC}$, $\angle CAE \cong \angle CBD$
Prove: $\triangle CAE \cong \triangle CBD$

Name two triangles that are congruent by ASA

9) 

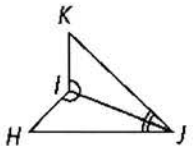
$\triangle HIJ \cong \triangle MLK$

10) 

$\triangle RST \cong \triangle YXZ$

11) Given: $\angle HIJ \cong \angle KIJ$
$\angle IJH \cong \angle IJK$

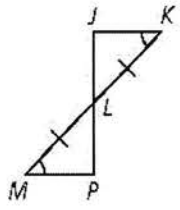
Prove: $\Delta HIJ \cong \Delta KIJ$



Statement	Reasons
$\angle HIJ \cong \angle KIJ$	Given
$\angle IJH \cong \angle IJK$	Given
$IJ \cong IJ$	Reflexive Property
$\Delta HIJ \cong \Delta KIJ$	ASA

12) Given: $\angle K \cong \angle M$
$\overline{KL} \cong \overline{ML}$

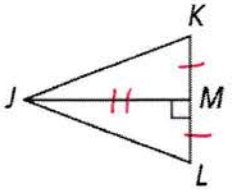
Prove: $\Delta JKL \cong \Delta PML$



Statement	Reasons
$\angle K \cong \angle M$	Given
$\overline{KL} \cong \overline{ML}$	Given
$\angle JLK \cong \angle PLM$	VA
$\Delta JKL \cong \Delta PML$	ASA

13) Given: $\overline{JM}$ bisects $\angle J$
$\overline{JM} \perp \overline{KL}$

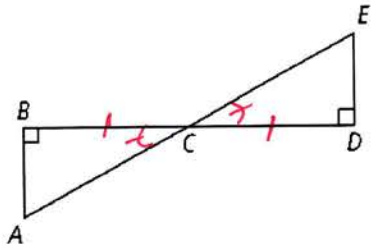
Prove: $\Delta JMK \cong \Delta JML$



Statement	Reasons
$\overline{JM}$ bisects $\angle J$	Given
$\overline{KM} \cong \overline{ML}$	Definition of a Bisector
$\overline{JM} \perp \overline{KL}$	Given
$\angle JML$ & $\angle JMK$ are right angles	Def. of Perpendicular Lines
$\angle JML \cong \angle JMK$	All right angles are congruent to each other.
$\overline{JM} \cong \overline{JM}$	Reflexive Property
$\Delta JMK \cong \Delta JML$	SAS

14) Given: $\angle B$ and $\angle D$ are right angles
$\overline{AE}$ bisects $\overline{BD}$

Prove: $\Delta ABC \cong \Delta EDC$



Statement	Reasons
$\angle B$ and $\angle D$ are right angles	Given
$\angle B \cong \angle D$	Right angles are $\cong$ to each other
$\overline{BC} \cong \overline{DC}$	Def. of Bisector
$\angle BCA \cong \angle DCE$	VA
$\Delta ABC \cong \Delta EDC$	ASA