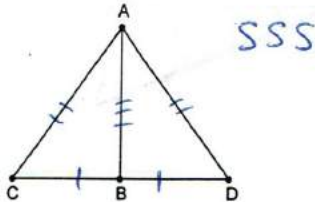


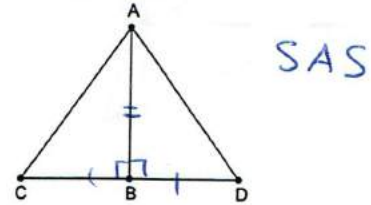
Triangle Congruence Practice

Mark the diagram based on the given information and what can be determined from the diagram. Then state the reason for triangle congruence.

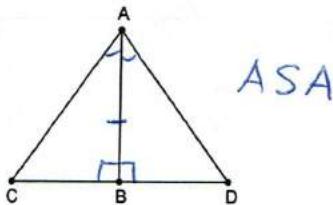
1. Given: B is the midpoint of \overline{CD}
 $\overline{AC} \cong \overline{AD}$



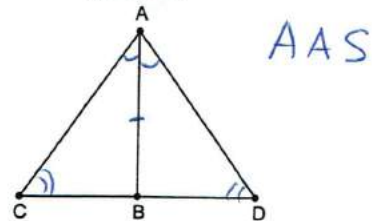
2. Given: B is the midpoint of \overline{CD}
 $\overline{AB} \perp \overline{CD}$



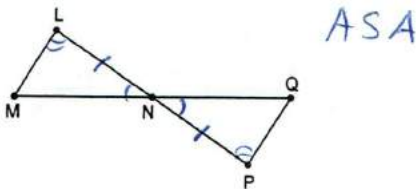
3. Given: $\overline{AB} \perp \overline{CD}$
 \overline{AB} bisects $\angle CAD$



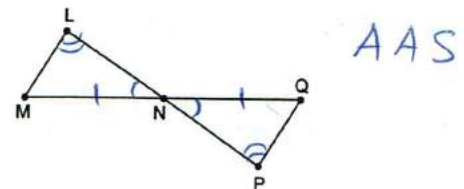
4. Given: \overline{AB} bisects $\angle CAD$
 $\angle C \cong \angle D$



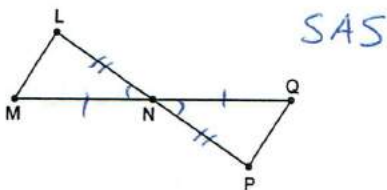
5. Given: $\overline{LM} \parallel \overline{QP}$
 N is the midpoint of \overline{LP}



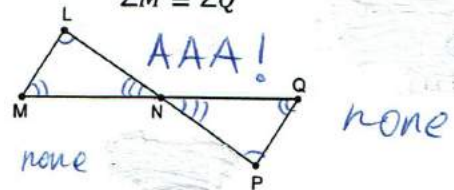
6. Given: $\overline{LM} \parallel \overline{QP}$
 N is the midpoint of \overline{MQ}



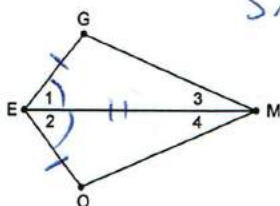
7. Given: \overline{LP} and \overline{MQ} bisect each other



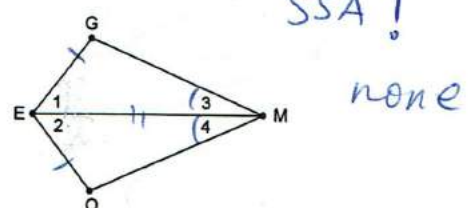
8. Given: $\angle L \cong \angle P$
 $\angle M \cong \angle Q$



9. Given: \overline{EM} bisects $\angle GEO$
 $\overline{GE} \cong \overline{OE}$

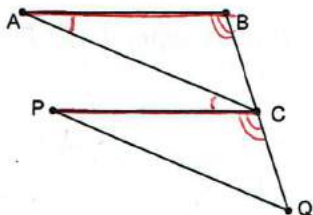


10. Given: \overline{EM} bisects $\angle GMO$
 $\overline{GE} \cong \overline{OE}$

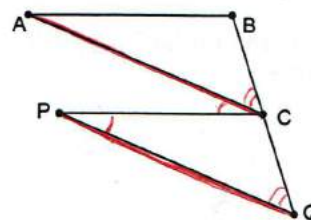


For 11–12, mark the diagram based on the given information and any valid conclusions you can make from it.

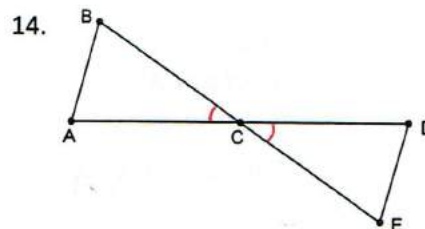
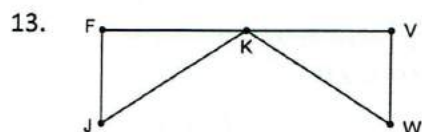
11. Given: $\overline{AB} \parallel \overline{PC}$



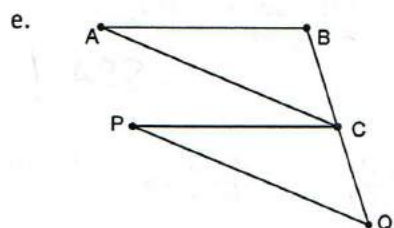
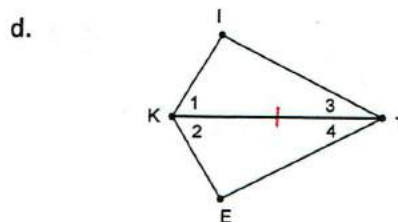
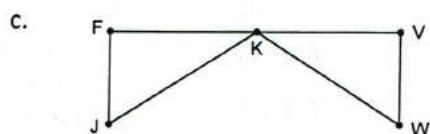
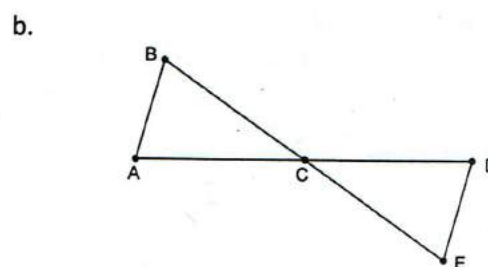
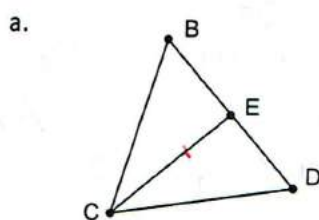
12. Given: $\overline{AC} \parallel \overline{PQ}$



For 13–14, determine if there are any vertical angles in the diagram. If there are, name them.

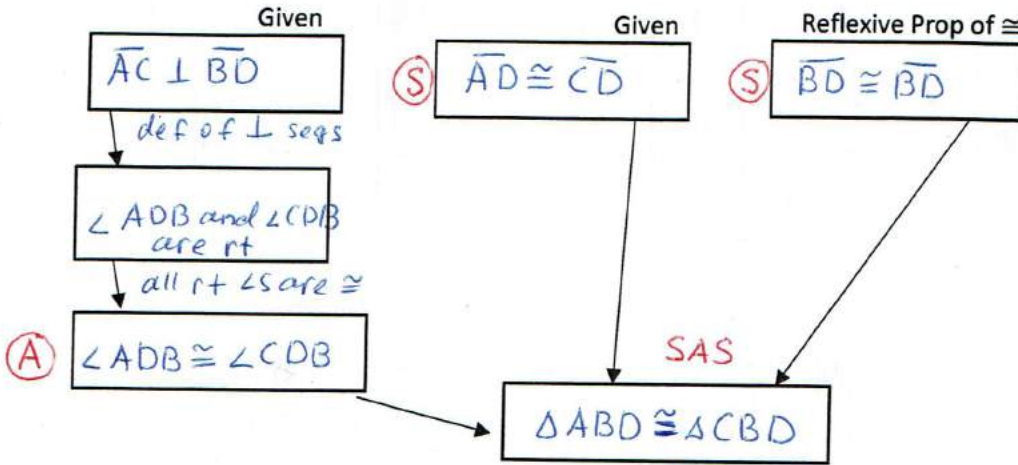
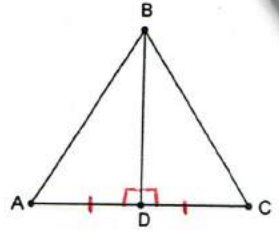


15. What parts, if any, can be named congruent by reflexive property of congruence in the following diagrams?

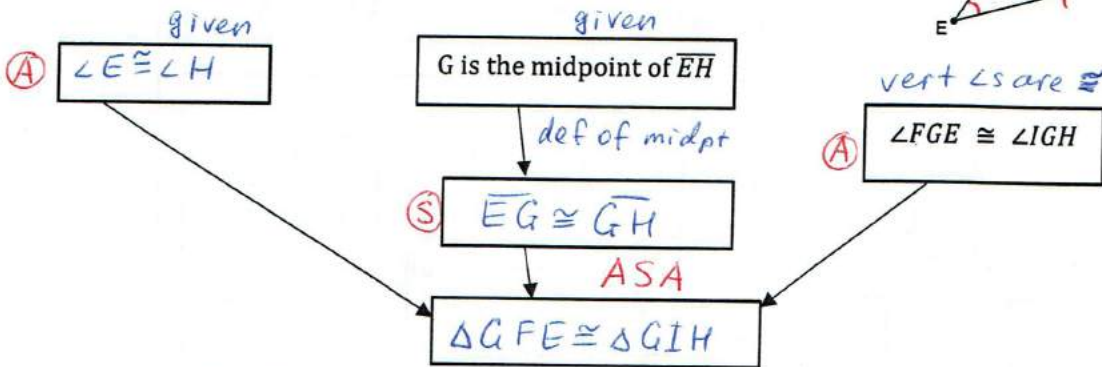
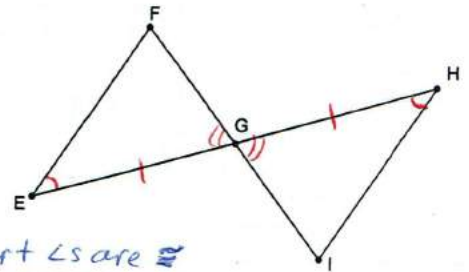


Introduction to Triangle Congruence Proof

Ex 1) Given: $\overline{AD} \cong \overline{CD}$
 $\overline{AC} \perp \overline{BD}$
 Prove: $\triangle ABD \cong \triangle CBD$

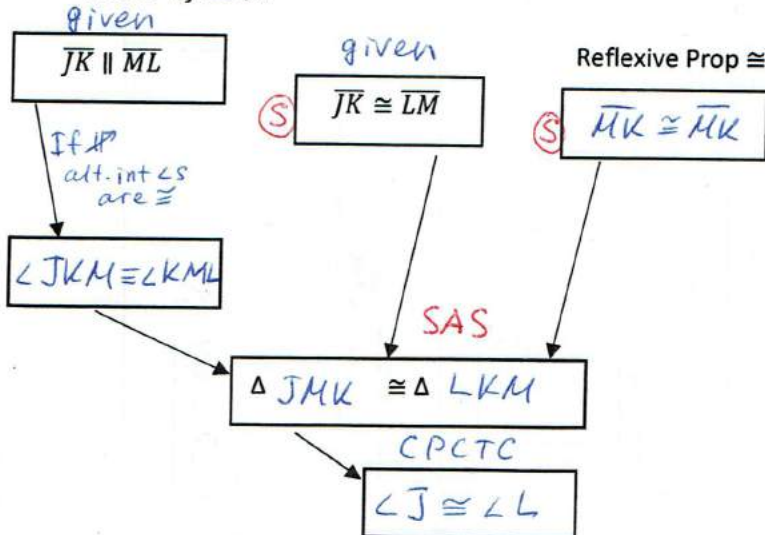
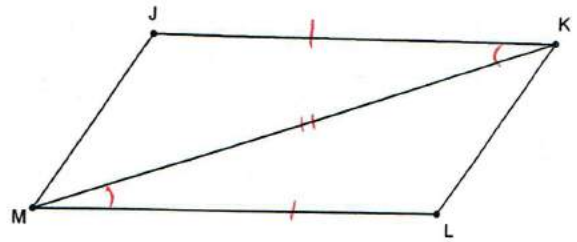


Ex 2) Given: $\angle E \cong \angle H$
 G is the midpoint of \overline{EH}
 Prove: $\triangle GFE \cong \triangle GIH$

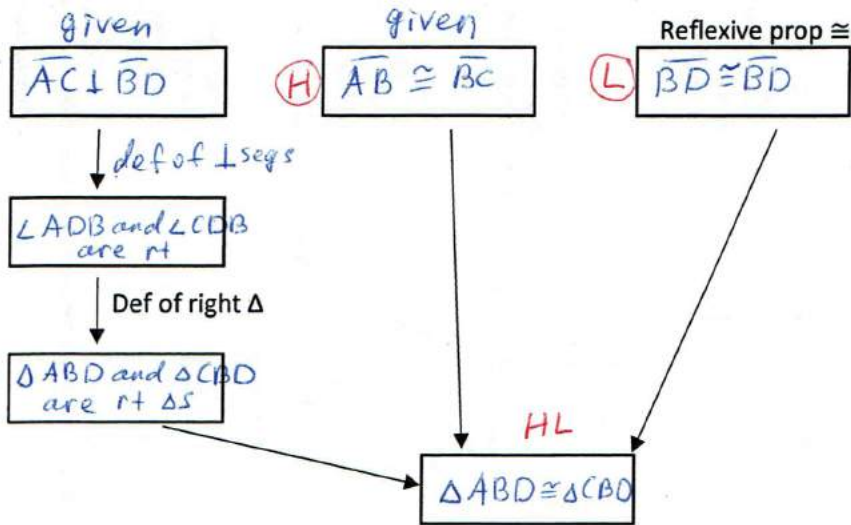
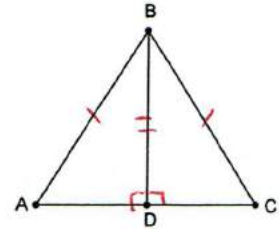


Ex 3) Given: $\overline{JK} \parallel \overline{ML}$
 $\overline{JK} \cong \overline{LM}$

Prove: $\angle J \cong \angle L$

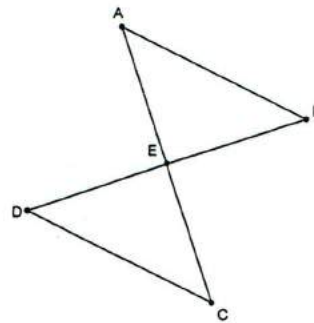


Ex 4) Given: $\overline{AB} \cong \overline{BC}$
 $\overline{AC} \perp \overline{BD}$
 Prove: $\triangle ABD \cong \triangle CBD$

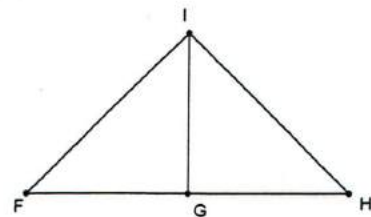


Use separate paper to complete the following.

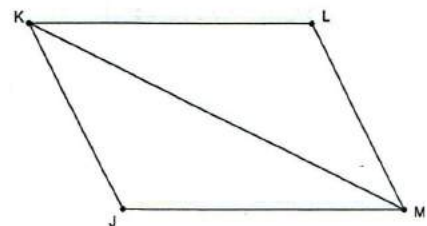
Ex 5) Given: $\overline{AB} \parallel \overline{CD}$
 $\overline{AB} \cong \overline{CD}$
 Prove: $\overline{AE} \cong \overline{CE}$



Ex 6) Given: \overline{IG} bisects $\angle FIH$
 $\overline{IF} \cong \overline{IH}$
 Prove: $\angle F \cong \angle H$



Ex 7) Given: $\overline{KL} \parallel \overline{JM}$
 $\overline{KJ} \parallel \overline{LM}$
 Prove: $\overline{KJ} \cong \overline{ML}$



Unit 3 packet
 P. 19 Ex 5)

Given: $\overline{AB} \parallel \overline{CD}$

$\overline{AB} \cong \overline{CD}$

Prove: $\overline{AE} \cong \overline{CE}$

