

See **ANSWERS** below on **PAGE 2**.

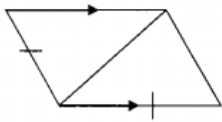
1. Given: E is the midpoint of BD; Conclusion: $BE \cong ED$
2. Given: $\angle TOM$ is the supplement of $\angle SUE$; Conclusion: $m\angle TOM + m\angle SUE = 180$
3. Given: $\angle HAM$ is vertical to $\angle EAT$; Conclusion: $\angle HAM \cong \angle EAT$
4. Given: $FA \cong RM$; Conclusion: $FA = RM$
5. Given: $m\angle AFD + m\angle BAT = 180$; Conclusion: $\angle AFD$ and $\angle BAT$ are supplementary

For each given, state the conclusion and the justification for the conclusion.

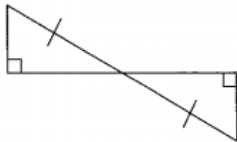
6. Given: $\angle CAT$ and $\angle RAP$ are vertical angles
7. Given: UB bisects $\angle RUV$
8. Given: $\angle CAT$ and $\angle DOG$ are complementary

Can the two triangles be proven congruent? If so, write the method used. If not, write “none”.

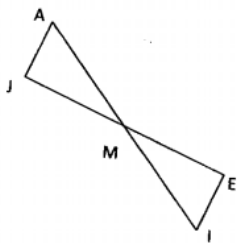
9.



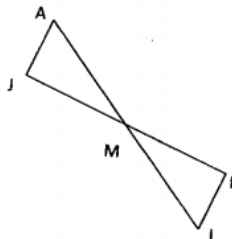
10.



11. M is the midpoint of JE, $\angle A \cong \angle I$

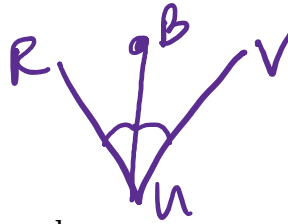


12. M is the midpoint of JE, $AJ \cong IE$



Answers:

1. Midpoint theorem
2. Definition of supplementary
3. Vertical angle theorem
4. Definition of congruent
5. Definition of supplementary
6. $\angle CAT \cong \angle RAP$; Vertical angle theorem
7. $\angle RUB \cong \angle BUV$; Definition of bisector



8. $m\angle CAT + m\angle DOG = 90$; Definition of complementary

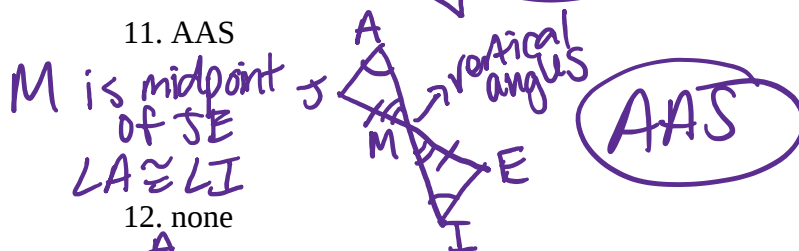
9. none



10. AAS



11. AAS



12. none

