Name: Key Date: _____ Period: __

WS – Justifications for Geometric Proof

1. Given: $\overline{AM} \cong \overline{WU}$
   Conclusion: $AM = WU$

   Why: Def. of $\cong$

2. Given: E is the midpoint of $\overline{BD}$
   Conclusion: $\overline{BE} \cong \overline{ED}$

   Why: Def. of midpoint

3. Given: A bisects $\overline{CT}$
   Conclusion: $\overline{CA} \cong \overline{AT}$

   Why: Def. of Bisect

4. Given: $CO = OL$
   Conclusion: $\overline{CO} \cong \overline{OL}$

   Why: Def. of $\cong$

5. Given: $\angle DAY$ and $\angle YAK$ are a linear pair
   Conclusion: $\angle DAY$ and $\angle YAK$ are supplementary

   Why: Linear Pair Postulate

6. Given: $\angle TOM$ is the supplement of $\angle SUE$
   Conclusion: $m\angle TOM + m\angle SUE = 180$

   Why: Def. of Supplementary

7. Given: A and B lie in Plane JOG
   Conclusion: A and B are collinear

   Why: Two Point Postulate
   (Through any two points, there exists exactly one line)

8. Given: A is in the interior of $\angle GLD$
   Conclusion:
   $m\angle GLA + m\angle ALD = m\angle GLD$

   Why: Angle Addition Postulate

9. Given: $\angle 1$ is the complement to $\angle 3$
   Conclusion: $m\angle 1 + m\angle 3 = 90$

   Why: Def. of Complementary

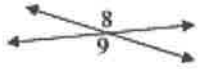
10. Given: $\angle HAM$ is vertical to $\angle EAT$
    Conclusion: $\angle HAM \cong \angle EAT$

    Why: Vertical $\angle$'s Thm

11. Given: 

    Conclusion: U is the midpoint of $\overline{RN}$

    Why: Def. of midpoint

12. Given: 

    Conclusion: $\angle 8$ and $\angle 9$ are vertical angles

    Why: Definition of Vertical $\angle$'s

13. Given: $m\angle NAT + m\angle WED = 90$
    Conclusion: $\angle NAT$ and $\angle WED$ are complementary

    Why: Def. of complementary

14. Given: $\overline{FA} \cong \overline{RM}$
    Conclusion: $FA = RM$

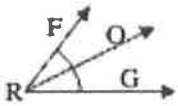
    Why: Def. of $\cong$

15. Given: $\overline{MA} \cong \overline{TH}$
Conclusion: $MA = TH$

Why: Def. of $\cong$

16. Given: $m\angle AFD + m\angle BAT = 180$
Conclusion: $\angle AFD, \angle BAT$ are supplementary

Why: Def. of Supplementary

17. Given: 

Conclusion: $\angle FRO \cong \angle ORG$

Why: Def. of bisect

18. Given: $m\angle 2 = m\angle 6$
Conclusion: $\angle 2 \cong \angle 6$

Why: Def. of $\cong$