

Name: _____

Period: _____

Making Conclusions

1. Given: $\overline{TO} \cong \overline{AN}$

skip

Conclusion: _____

Justification: _____

2. Given: E is the midpoint of \overline{BD}

Conclusion: _____

Justification: _____

3. Given: A bisects \overline{CT}

Conclusion: _____

Justification: _____

4. Given: $CO = OL$

skip

Conclusion: _____

Justification: _____

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

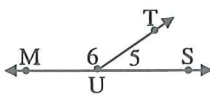
Conclusion: _____

Justification: _____

6. Given: $\angle TOM$ is the supplement of $\angle SUE$

Conclusion: _____

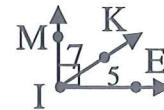
Justification: _____



7. Given:

Conclusion: _____

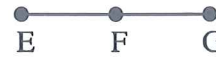
Justification: _____



8. Given:

Conclusion: _____

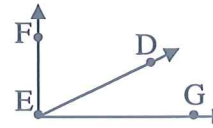
Justification: _____



9. Given:

Conclusion: _____

Justification: _____



10. Given:

Conclusion: _____

Justification: _____

11. Given: $m\angle ABC = m\angle HIJ$

skip

Conclusion: _____

Justification: _____

12. Given: $\angle CAT$ and $\angle RAP$ are vertical angles.

Conclusion: _____

Justification: _____

13. Given: $\angle SAT \cong \angle ACT$

skip

Conclusion: _____

Justification: _____

14. Given: A is in the interior of $\angle GLD$

Conclusion: _____

Justification: _____

skip

15. Given: $\overline{FA} \cong \overline{RM}$

Conclusion: _____

Justification: _____

16. Given: $\angle HAM$ is vertical to $\angle EAT$

Conclusion: _____

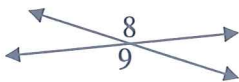
Justification: _____



17. Given:

Conclusion: _____

Justification: _____



18. Given;

Conclusion: _____

Justification: _____

19. Given: $m\angle NAT + m\angle WED = 90^\circ$

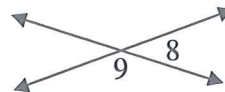
Conclusion: _____

Justification: _____

20. Given: \overline{UB} bisects $\angle RUY$

Conclusion: _____

Justification: _____



21. Given:

Conclusion: _____

Justification: _____



22. Given:

Conclusion: _____

Justification: _____

23. Given: $\angle PAI$ and $\angle IAR$ are a linear pair

Conclusion: _____

Justification: _____

24. Given: $\angle CAT$ and $\angle RAP$ are complementary angles.

Conclusion: _____

Justification: _____

25. Given: $m\angle NAT + m\angle WED = 180^\circ$

Conclusion: _____

Justification: _____

26. Given: A is between J and M

Conclusion: _____

Justification: _____

“Making Conclusions” Worksheet continues on the next page...

For #27 and 28, a two column proof is given but steps are missing. Fill in the missing steps and rewrite the whole proof correctly.



Given: $\angle 1$ is supplementary to $\angle 2$, $\angle 3$ is supplementary to $\angle 4$, and $\angle 2 \cong \angle 4$

Prove: $\angle 1 \cong \angle 3$

Statements	Reasons
1. $\angle 1$ & $\angle 2$ are supp. $\angle 3$ & $\angle 4$ are supp.	Given
2. $m\angle 1 + m\angle 2 = 180^\circ$ $m\angle 3 + m\angle 4 = 180^\circ$	Def. of Supplement.
3. $m\angle 1 + m\angle 2 = m\angle 3 + m\angle 4$	
4.	
5.	
6. $m\angle 1 + m\angle 4 = m\angle 3 + m\angle 4$	Substitution prop, Steps
7. $m\angle 1 \cong m\angle 3$	Subtraction prop.

Skip step 5.



Given: $\angle 5$ is complementary to $\angle 7$

Prove: $\overline{MI} \perp \overline{IE}$

Statements	Reasons
1. $\angle 5$ & $\angle 7$ are comp.	Given
2. $m\angle 5 + m\angle 7 = 90^\circ$	Def. of complement.
3.	
4. $m\angle MIE = 90^\circ$	Substitution,
6. $\overline{MI} \perp \overline{IE}$	Definition of perpendicular

Name: Key

Period: _____

Making Conclusions

1. Given: $\overline{TO} \cong \overline{AN}$

Conclusion: $TO = AN$

Justification: def of equality/ \cong

2. Given: E is the midpoint of \overline{BD}

Conclusion: $BE \cong ED$

Justification: def of midpt

3. Given: A bisects \overline{CT}

Conclusion: $CA \cong AT$

Justification: def of bisect

4. Given: $CO = OL$

Conclusion: $\overline{CO} \cong \overline{OL}$

Justification: def of \cong /equality

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

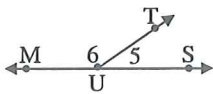
Conclusion: $\angle DAY + \angle YAK = 180^\circ$

Justification: linear pairs are suppl.

6. Given: $\angle TOM$ is the supplement of $\angle SUE$

Conclusion: $\angle TOM + \angle SUE = 180^\circ$

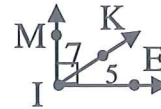
Justification: def of suppl.



7. Given:

Conclusion: $\angle 5 + \angle 6 = 180$

Justification: linear pairs are suppl.



8. Given:

Conclusion: $\angle 7 + \angle 5 = 90^\circ$

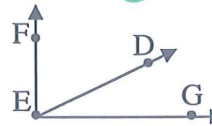
Justification: def of compl.



9. Given:

Conclusion: $EG = EF + FG$

Justification: Segment addition



10. Given:

Conclusion: $\angle FEG = \angle FED + \angle DEG$

Justification: angle addition

11. Given: $m\angle ABC = m\angle HIJ$

Conclusion: $\angle ABC \cong \angle HIJ$

Justification: def of equality/ \cong

12. Given: $\angle CAT$ and $\angle RAP$ are vertical angles.

Conclusion: $\angle CAT \cong \angle RAP$

Justification: Vertical \angle s are \cong

13. Given: $\angle SAT \cong \angle ACT$

Conclusion: $m\angle SAT = m\angle ACT$

Justification: def of equality/ \cong

14. Given: A is in the interior of $\angle GLD$

Conclusion: $\angle GLA + \angle LAD = \angle GLD$

Justification: Angle Addition

15. Given: $\overline{FA} \cong \overline{RM}$

Conclusion: $FA = RM$

Justification: def of equality/ \cong

16. Given: $\angle HAM$ is vertical to $\angle EAT$

Conclusion: $\angle HAM \cong \angle EAT$

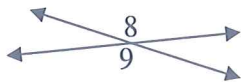
Justification: Vertical \angle s are \cong



17. Given:

Conclusion: $RU \cong UN$

Justification: def of midpt



18. Given;

Conclusion: $\angle 8 \cong \angle 9$

Justification: Vertical \angle s are \cong

19. Given: $m\angle NAT + m\angle WED = 90^\circ$

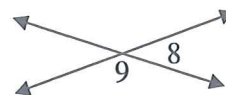
Conclusion: $\angle NAT$ and $\angle WED$ are Compl.

Justification: def of compl.

20. Given: \overline{UB} bisects $\angle RUY$

Conclusion: $\angle RUB \cong \angle UBY$

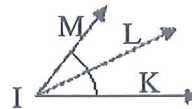
Justification: def of Bisector



21. Given:

Conclusion: $\angle 8 + \angle 9 = 180^\circ$

Justification: linear pairs are Suppl.



22. Given:

Conclusion: $\angle MIL \cong \angle LIK$

Justification: def of \angle bisector

23. Given: $\angle PAI$ and $\angle IAR$ are a linear pair

Conclusion: $\angle PAI + \angle IAR = 180^\circ$

Justification: linear pairs are Suppl.

24. Given: $\angle CAT$ and $\angle RAP$ are complementary

angles.

Conclusion: $\angle CAT + \angle RAP = 90^\circ$

Justification: def of compl.

25. Given: $m\angle NAT + m\angle WED = 180^\circ$

Conclusion: $\angle NAT$ and $\angle WED$ are Suppl.

Justification: def of Suppl.

26. Given: A is between J and M



Conclusion: $AJ + JM = AM$

Justification: Segment addition

“Making Conclusions” Worksheet continues on the next page...

For #27 and 28, a two column proof is given but steps are missing. Fill in the missing steps and rewrite the whole proof correctly.



Given: $\angle 1$ is supplementary to $\angle 2$, $\angle 3$ is supplementary to $\angle 4$, and $\angle 2 \cong \angle 4$

Prove: $\angle 1 \cong \angle 3$

Statements	Reasons
1. $\angle 1$ & $\angle 2$ are supp. $\angle 3$ & $\angle 4$ are supp.	Given
2. $m\angle 1 + m\angle 2 = 180^\circ$ $m\angle 3 + m\angle 4 = 180^\circ$	Def. of Supplement.
3. $m\angle 1 + m\angle 2 = m\angle 3 + m\angle 4$	Substitution
4. $\angle 2 \cong \angle 4$	Given
~~~~~	
5. _____	(def of $\cong$ step)
6. $m\angle 1 + m\angle 4 = m\angle 3 + m\angle 4$	Substitution prop, Steps.
7. $m\angle 1 \cong m\angle 3$	Subtraction prop.



Given:  $\angle 5$  is complementary to  $\angle 7$

Prove:  $\overline{MI} \perp \overline{IE}$

Statements	Reasons
1. $\angle 5$ & $\angle 7$ are comp.	Given
2. $m\angle 5 + m\angle 7 = 90^\circ$	Def. of complement.
3. $\angle 5 + \angle 7 = \angle MIE$	angle addition
4. $m\angle MIE = 90^\circ$	Substitution
6. $\overline{MI} \perp \overline{IE}$	Definition of perpendicular