Geometry R – Mr. Bo
Unit 3 – Day 2 HW

Name:_____
Date: _____

Write the Definition:

1. Perpendicular lines:_____

2. Midpoint:_____

3. Segment Bisector:_____

4. Angle Bisector:_____

Select one term from above and re-write its definition as a bi-conditional (…if and only if…)

5. _____

Draw a picture that depicts the given fact and then circle the conclusion that is true.

6. Known Fact: $\overline{GH}$ bisects $\angle AGT$

   Conclusion A: $\angle AGT \cong \angle AGH$

   Conclusion B: $\angle TGH \cong \angle AGH$

7. Known Fact: P is the midpoint of $\overline{AT}$.

   Conclusion A: $\overline{AP} \cong \overline{PT}$

   Conclusion B: $\overline{AT} \cong \overline{AP}$

For each pair of statements, the first statement is a Theorem, Definition, or Postulate and the second statement is a fact. Write the true conclusion that can be drawn.

8. Theorem: If two angles are right, then they are congruent.
   Fact: ∠A and ∠B are right angles.

   Conclusion:_____

9. Definition: A segment bisector goes through the midpoint of another segment.
   Fact: $\overline{MR}$ bisects $\overline{VG}$ at P.

   Conclusion:_____

For each pair of statements, the first statement is a fact and the second statement is a true conclusion. Write the theorem, definition, or postulate that is the reason for the conclusion.

10. Fact: M is the midpoint of $\overline{HG}$
    Conclusion: $\overline{HM} \cong \overline{GM}$

11. Fact: $\overline{PR}$ bisects $\overline{ST}$ at F.

Conclusion: F is the midpoint of $\overline{ST}$.

Use the *Transitive Property* of Equality to write a conclusion based on the two given facts.

12. Fact: $\angle A \cong \angle M$

Fact: $\angle R \cong \angle M$

Conclusion:_____

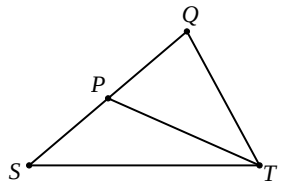
13. Fact: $\overline{BT} \cong \overline{HK}$

Fact: $\overline{CD} \cong \overline{BT}$

Conclusion:_____

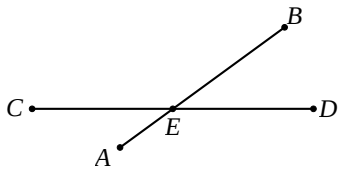
For the given fact(s), write the conclusion(s) and reason(s) in Two-Column format.
(Include the givens as statements in these questions).

14. Given: $\overline{TP}$ bisects $\angle STQ$



Statements	Reasons
1._____	
2._____	

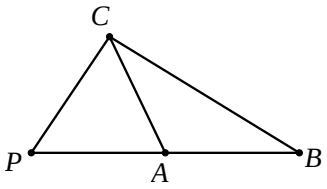
15. Given: $\overline{AB}$ bisects $\overline{CD}$ at E.



Statements	Reasons
1._____	
2._____	
3._____	

16. Given: A is the midpoint of $\overline{PB}$

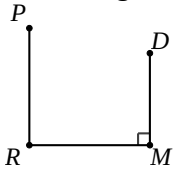
$\overline{AP} \cong \overline{PC}$



Statements	Reasons
1._____	
2._____	
3._____	
4._____	

17. Given: $\overline{PR} \perp \overline{MR}$

∠M is a right Angle.



Statements	Reasons
1._____	
2._____	
3._____	
4._____	