Name _____ Date _____ Pd _____

CYU 2.5 Geometric Reasoning DAY TWO Verifying Angles

☑ *Use when you get it right all by yourself*

S *Use when you did it all by yourself, but made a silly mistake*

H *Use when you could do it alone with a little help from teacher or peer*

G *Use when you completed the problem in a group*

X *Use when a question was attempted but wrong (get help)*

N *Use when a question was not even attempted*

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Addition/Subtraction POE/POC	4		
Substitution POE	1	8	
Transitive POE/POC	3	10	
Def. of Congruent Angles/Segments	2	11, 12	15 - 21
Def. of Vertical Angles	6		15 - 21
Def. of Complementary/Supplementary Angles	5	9	15 - 21
Def. of Right angles	7		
Angle or Segment Bisector		12	
Def. of Midpoint		13, 14	

Give a reason (property, postulate, theorem or definition) for the following:

1. Given: m∠1 + m∠2 = 180, m∠1 = m∠3
   Then: m∠3+ m∠2 = 180   Reason: _____

2. Given: ∠A ≅ ∠B
   Then: m∠A = m∠B   Reason: _____

3. Given: $\overline{AB}$ ≅ $\overline{TH}$ & $\overline{TH}$ ≅ $\overline{DW}$
   Then: $\overline{AB}$ ≅ $\overline{DW}$ Reason: _____

4. Given: m∠1 + m∠2 = m∠3 + m∠2
   Then: m∠1 = ∠3   Reason: _____

5. Given: ∠2 and ∠4 are supplementary
   Then: m∠2 + m∠4 = 180   Reason: _____

6. Given: the figure below
   Then: ∠4 ≅ ∠5   Reason: _____
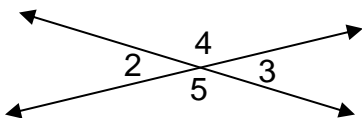
Complete the following:

7. Given: ∠A is a right angle   Then: _____
   Reason: _____

8. Given: m∠8 = 90 & m∠9 = 90   Then: _____
   Reason: Substitution Property

9. Given: ∠1 & ∠2 are complementary   Then: _____
   Reason: _____

10. Given: ∠P ≅ ∠Q & ∠Q ≅ ∠R   Then: _____
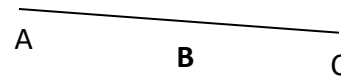   Reason: Transitive prop of congruence

11. Given: AB = PQ   Then: _____
   Reason: If 2 segments have the equal length, then they are congruent.

12. Given: AD is an angle bisector in the figure to the right
    Then: _____
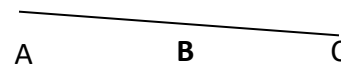   Reason: If an angle has a bisector, then it forms 2 congruent angles.
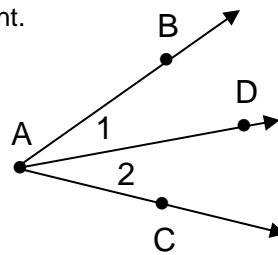
13. Given: $\overline{AB} \cong \overline{BC}$ Prove: B is midpoint of $\overline{AC}$

Reason: _____

14. Given: B is midpoint of AC   Prove: $\overline{AB} \cong \overline{BC}$

Reason: _____

Use the figure at the right to answer #15 - 21.

15. ∠FGA ≅ _____

16. ∠BGF and _____ are supplementary

17. m∠CGD = _____
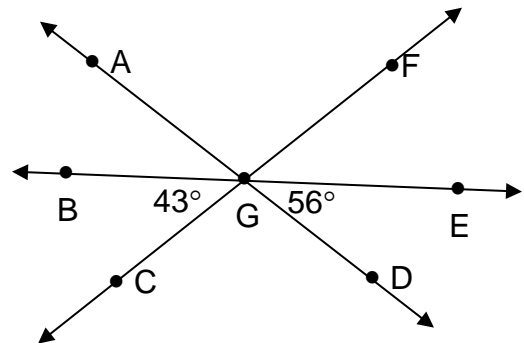
18. m∠AGF = _____

19. ∠EGC and _____ are supplementary

20. m∠AGB = _____

21. m∠AGC = _____

CYU Reflection: *How far can you go: basic, intermediate, or advanced?*
Rate your mastery level!
How confident are you with the skills this CYU covered? Circle the score you would give yourself.

1	2	3	4	5	6	7	8
Basic		Intermediate			Advanced		Solved ALL!