Geometry R – Mr. Bo

Name:_____

Unit 3 – Day 8 HW

Date: _____

Use a Equality Postulate to make a true conclusion and state which postulate you used.

1. Given: $AM + SR = CD + SR$

2. Given: $m < 2 = m < 4$
$$m < 5 = m < 6 + m < 4$$

Conclusion:_____

Conclusion:_____
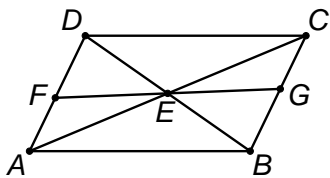
Postulate: _____

Postulate:_____

3. Explain how the Addition Postulate is used differently than the Angle Addition Postulate.

Complete the missing parts of the proof.

4. Given: $\overline{AD} \cong \overline{BC}$
$\overline{FD} \cong \overline{BG}$

Prove: $\overline{AF} \cong \overline{CG}$

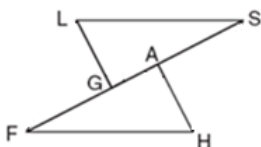| Statements	Reasons
1. $\overline{AD} \cong \overline{BC}$	1. Given
2. _____	2. Given
3. $AF + FD = CG + BG$	3. Segment Addition
4. _____	4. _____
5. $AF = CG$	5. Subtraction

Complete a Two-column proof.

5. Given: $\overline{FGAS}$
$\overline{FG} \cong \overline{SA}$

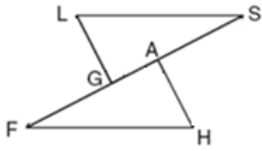Prove: $\overline{FA} \cong \overline{SG}$

Hint: Is there a common part?
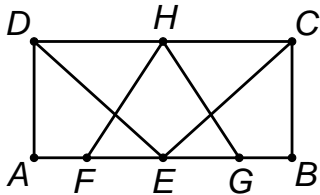*Is this addition or subtraction method?*

6. Given: $\overline{FGAS}$
    $\overline{FA} \cong \overline{SG}$

    Prove: $\overline{FG} \cong \overline{SA}$

Hint: Is there a common part?
Is this addition or subtraction?

7. Given: $\overline{AFEGB}$

    E midpoint of $\overline{FG}$
    $\overline{AF} \cong \overline{GB}$
    Prove: $\overline{AE} \cong \overline{BE}$

8. Prove: *"Congruent angles have congruent Complements."*

Hint: Use the picture and assume
$\angle 1 \cong \angle 2$, m$\angle$ABC=90°, m$\angle$PQR=90°.