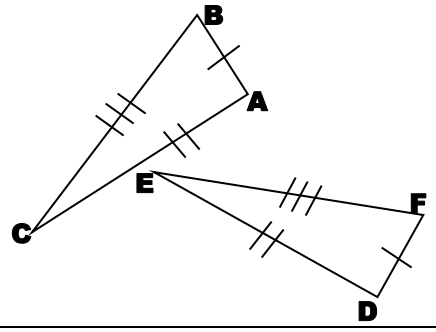
NAME_____**DATE**_____**PER.**_____

REVIEW #6: Congruent Triangles & Proofs

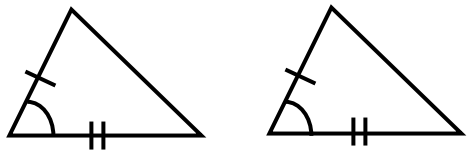
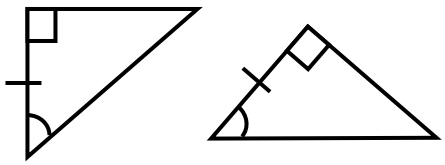
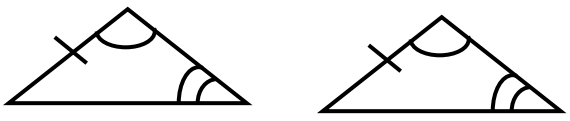
PART 1: CORRESPONDING PARTS OF CONGRUENT TRIANGLES
Given each set of congruent triangles, complete each of the following.

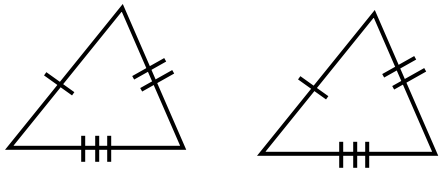
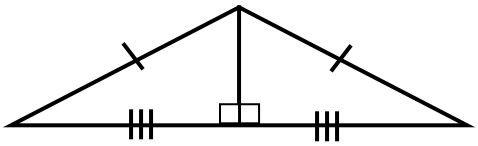
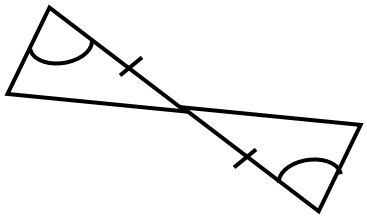
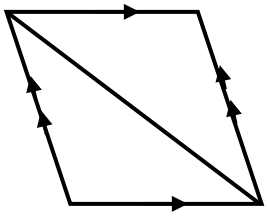
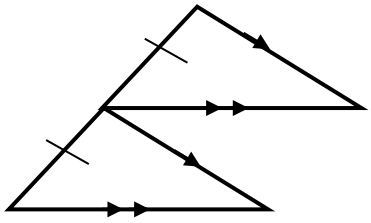
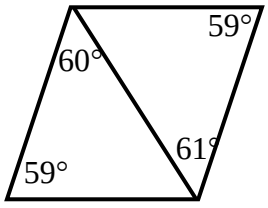
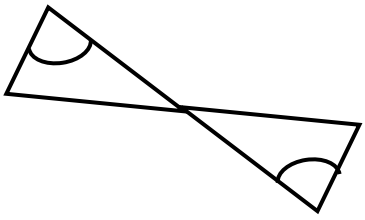
1. $\angle S \cong$ _____ $\overline{FO} \cong$ _____ $\angle P \cong$ _____ $\overline{EO} \cong$ _____ $\angle R \cong$ _____ $\overline{EF} \cong$ _____ $\Delta SRP \cong \Delta$_____	$\Delta RSP \cong \Delta FOE$
2. $\angle A \cong$ _____ $\overline{AB} \cong$ _____ $\angle B \cong$ _____ $\overline{BC} \cong$ _____ $\angle C \cong$ _____ $\overline{AC} \cong$ _____ $\Delta ABC \cong \Delta$_____	

Determine whether each statement is true or false. Circle one.

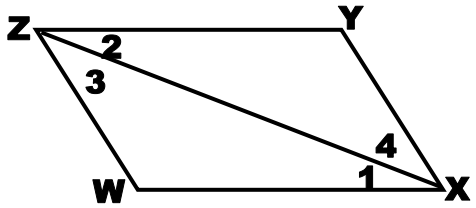
3. TRUE or FALSE?	If $\Delta ABC \cong \Delta XYZ$, then $\Delta BCA \cong \Delta YZX$.
4. TRUE or FALSE?	If $\Delta ABC \cong \Delta XYZ$, then $\Delta ABC \cong \Delta XZY$.
5. TRUE or FALSE?	If $\Delta ABC \cong \Delta XYZ$, then $\Delta BCA \cong \Delta ZYX$.

PART 2: CONGRUENT TRIANGLES BY SSS, SAS, ASA, AAS, and HL
Determine whether the following triangles are congruent by SSS, SAS, ASA, AAS, or HL or if they are not congruent.

6. _____	
7. _____	
8. _____	

9. _____	
10. _____	
11. _____	
12. _____	
13. _____	
14. _____	
15. _____	

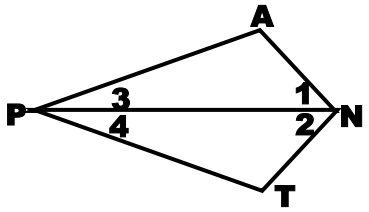
PART 3: PROOFS



Write a two-column proof for each of the following.

16. GIVEN: $\overline{WX} \parallel \overline{ZY}$
$\overline{ZW} \parallel \overline{YX}$
PROVE: $\Delta ZYX \cong \Delta XWZ$

STATEMENTS	REASONS
1. $\overline{WX} \parallel \overline{ZY}$	1.
2.	2. Given
3. $\angle 1 \cong \angle 2$	3.
4.	4. $\parallel \rightarrow$ Alt. Interior Angles are ¤
5. $\overline{XZ}$ ¤ $\overline{XZ}$	5.
6.	6.

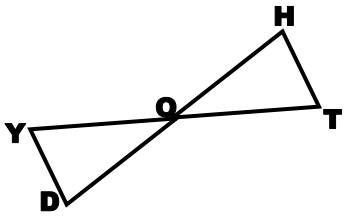


17. GIVEN: $\overline{AN} \cong \overline{TN}$; $\angle 1 \cong \angle 2$
PROVE: $\angle 3 \cong \angle 4$

STATEMENTS	REASONS
1.	1. Given
2. $\angle 1 \cong \angle 2$	2.
3.	3. Reflexive Property
4. $\Delta NAP \cong \Delta NTP$	4.
5.	5.

18. GIVEN: $\overline{YT}$ bisects $\overline{DH}$; $\overline{DH}$ bisects $\overline{YT}$

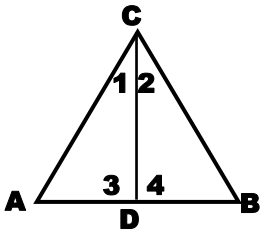
PROVE: $\overline{YD} \cong \overline{TH}$



STATEMENTS	REASONS
1. $\overline{YT}$ bisects $\overline{DH}$	1.
2.	2. Given
3. $\overline{OD} \cong \overline{OH}$	3.
4.	4. Definition of Segment Bisector
5. $\angle YOD \cong \angle HOT$	5.
6. $\Delta YDO \cong \Delta$_____	6.
7.	7.

19. GIVEN: $\overline{DC}$ bisects $\angle ACB$; $\angle 3 \cong \angle 4$

PROVE: $\angle A \cong \angle B$



STATEMENTS	REASONS
1. $\overline{DC}$ bisects $\angle ACB$	1.
2.	2. Given
3. $\angle 1 \cong \angle 2$	3.
4.	4. Reflexive Property
5. $\Delta ACD \cong \Delta$_____	5.
6.	6.

Part 4: Review

_____ 20.	Solve the following equation and write a justification for each step. $6r = 4r + 10$
_____ 21.	Points A, B and C are collinear, and B is between A and C. AB = 16 and AC = 27. What is the distance BC? (draw the picture)