

Name: _____ Date: _____ Per: _____

Geometry Chapter 5 Review – Version #2 for Retest: Congruent Triangles

This review must be completed accurately before retesting. Show all work!

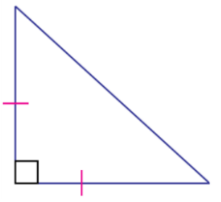
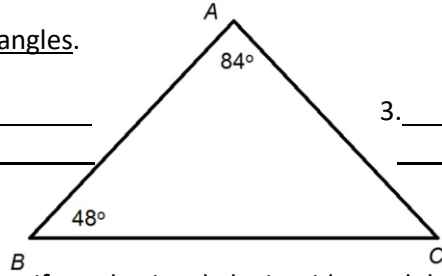
Classify each triangle by its sides and by its angles.

1. _____

 60°, 60°, x°

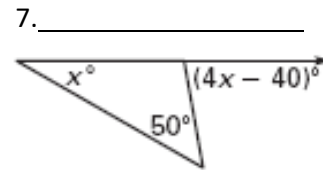
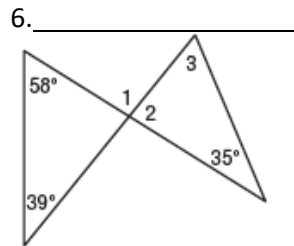
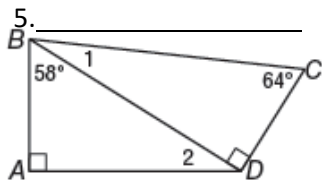
2. _____

3. _____



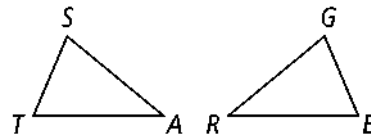
4. Use the distance formula and slope to classify each triangle by its sides and determine if it is a right triangle.
 A(4, -1), B(5, 6), and C(1, 3)

Use the angle measurements shown to solve for each variable or numbered angle. (Show steps)



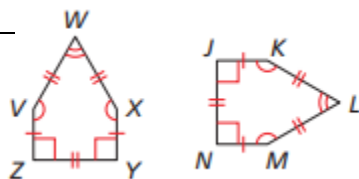
8. $\triangle SAT \cong \triangle GRE$. Complete each congruence statement.

- a. $\angle S \cong$ _____ b. $\overline{GR} \cong$ _____ c. $\angle E \cong$ _____
 d. $\triangle ERG \cong$ _____ e. $\triangle REG \cong$ _____ f. $\overline{EG} \cong$ _____

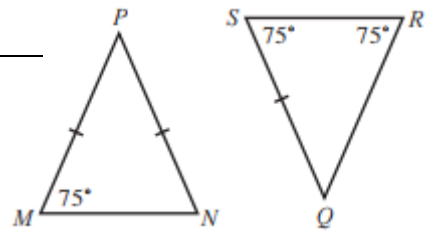


Identify any figures that can be proved congruent. Write a congruence statement for each pair of figures that are congruent, otherwise write "Not Congruent".

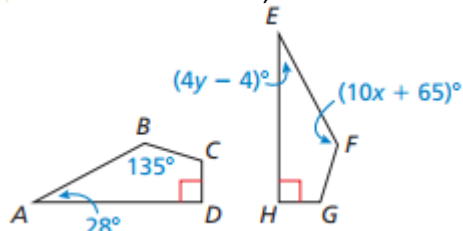
9. _____



10. _____



11. Given $ABCDE \cong EFGH$, find the values of x and y.

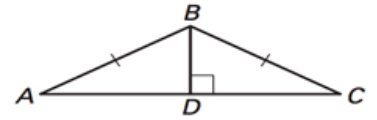
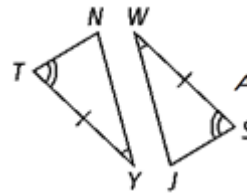
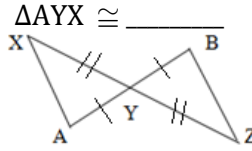
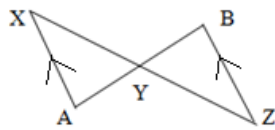
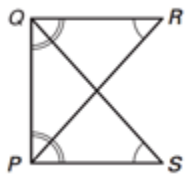


Decide whether enough information is given to prove that the triangles are congruent. If there is not enough information write, "Not Congruent". If there is enough information:

- State the congruence postulate or theorem you would use **SSS, SAS, ASA, AAS, or HL**
- Complete the congruence statement to show which triangles are congruent

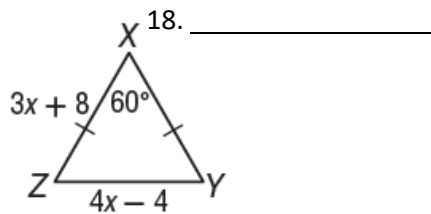
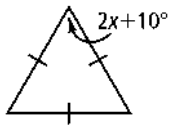
12. _____ 13. _____ 14. _____ 15. _____ 16. _____

$\Delta PQR \cong$ _____ $\Delta AYZ \cong$ _____ $\Delta AYZ \cong$ _____ $\Delta NTY \cong$ _____ $\Delta ABD \cong$ _____

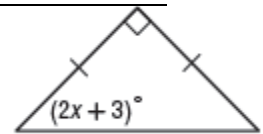


Find the value of each variable.

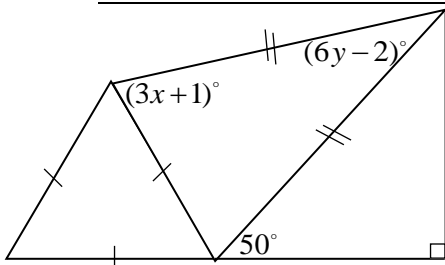
17. _____



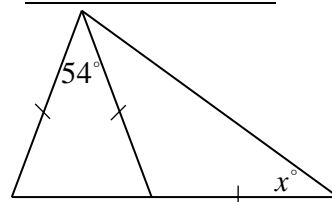
19. _____



20. _____



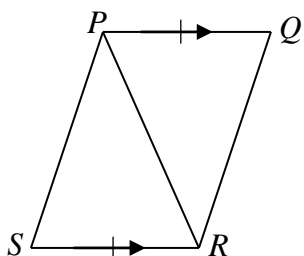
21. _____



Complete each proof.

22. Given: $\overline{PQ} \parallel \overline{SR}$
 $\overline{PQ} \cong \overline{SR}$

Prove: $\Delta PSR \cong \Delta RQP$

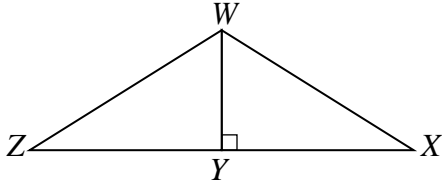


Statement	Reasoning
1. $\overline{PQ} \parallel \overline{SR}$	1.
2.	2.
3.	3. Given
4.	4. Reflexive Property of Congruence
5. $\Delta PSR \cong \Delta RQP$	5.

Complete each proof.

23. Given: $\overline{WY} \perp \overline{ZX}$
 $\angle ZWY \cong \angle XWY$

Prove: $\triangle ZWY \cong \triangle XWY$

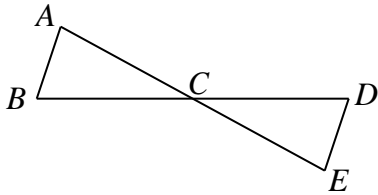


Statement	Reasoning
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- | | |
|---|----------|
| 1. $\overline{WY} \perp \overline{ZX}$ | 1. Given |
| 2. $\angle WYZ$ and $\angle WYX$ are right angles | 2. |
| 3. | 3. |
| 4. $\angle ZWY \cong \angle XWY$ | 4. |
| 5. | 5. |
| 6. | 6. |

24. Given: $\angle A \cong \angle E$
 C is the midpoint of \overline{AE}

Prove: $\angle D \cong \angle B$

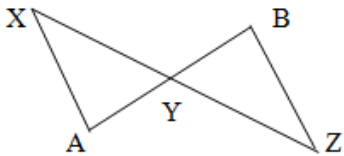


Statement	Reasoning
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- | | |
|--|----|
| 1. $\angle A \cong \angle E$ | 1. |
| 2. | 2. |
| 3. | 3. |
| 4. | 4. |
| 5. $\triangle ACB \cong \triangle ECD$ | 5. |
| 6. $\angle D \cong \angle B$ | 6. |

25. Given: \overline{AB} bisects \overline{XZ}
 and $\overline{XA} \parallel \overline{BZ}$

Prove: Y is the midpoint of \overline{AB}



Statement	Reasoning
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- | | |
|--|----------|
| 1. \overline{AB} bisects \overline{XZ} | 1. Given |
|--|----------|

26. What congruence do you need to know in order to show the two triangles are congruent by the given congruence theorem?

a. by SAS

b. by ASA

