

## Unit 4 Review Congruent Triangles

1. Name all the pairs of corresponding angles.

\_\_\_\_\_

2. Name all the pairs of vertical angles.

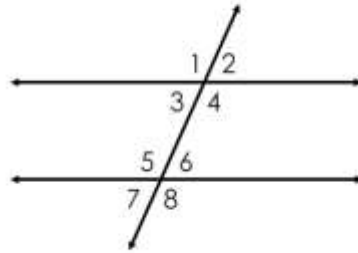
\_\_\_\_\_

3. Name all the pairs of alternate interior angles.

\_\_\_\_\_

4. Name all the pairs of alternate exterior angles.

\_\_\_\_\_



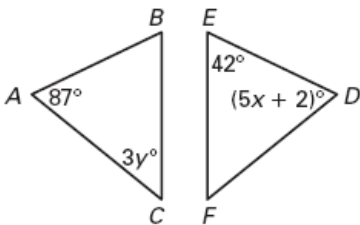
5. Name all the pairs of consecutive interior angles.

\_\_\_\_\_

6.  $\angle 1 \cong$  \_\_\_\_\_  $\cong$  \_\_\_\_\_  $\cong$  \_\_\_\_\_  
 $\angle 2 \cong$  \_\_\_\_\_  $\cong$  \_\_\_\_\_  $\cong$  \_\_\_\_\_

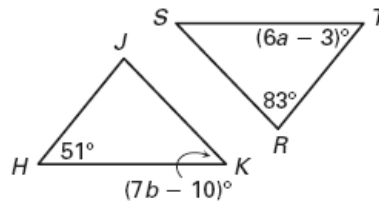
7.

Given  $\triangle ABC \cong \triangle DEF$ , find the values of  $x$  and  $y$ .

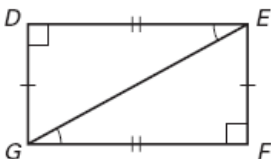


8.

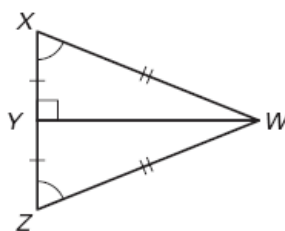
Given  $\triangle HJK \cong \triangle TRS$ , find the values of  $a$  and  $b$ .



9. Can these figures be proved congruent? Explain your reasoning using theorems, properties, etc.



10. Can these figures be proved congruent? Explain your reasoning using theorems, properties, etc.

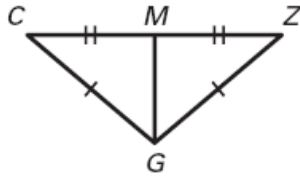


Name \_\_\_\_\_

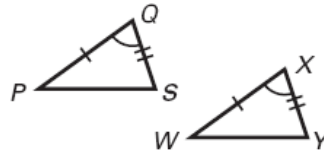
Date \_\_\_\_\_

Period \_\_\_\_\_

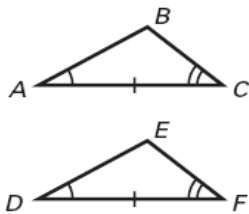
11. Which congruence postulate would prove these two triangles congruent?



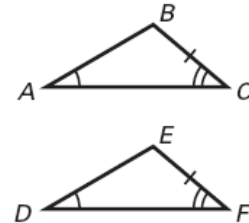
12. Which congruence postulate would prove these two triangles congruent?



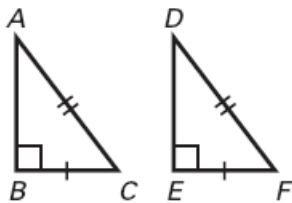
13. Which congruence postulate would prove these two triangles congruent?



14. Which congruence postulate would prove these two triangles congruent?



15. Which congruence postulate would prove these two triangles congruent?



16. Name the third piece of information needed to prove the triangles congruent.

Given:  $\overline{CA} \cong \overline{ZX}$  and  $\overline{AB} \cong \overline{XY}$

Prove:  $\triangle ABC \cong \triangle XYZ$  using the SAS Postulate

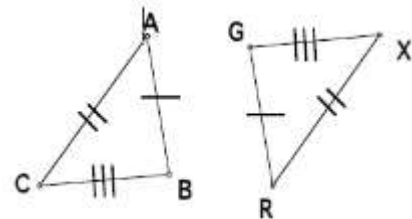
17. Name the third piece of information needed to prove the triangles congruent.

Given:  $\angle B \cong \angle Y$  and  $\overline{AB} \cong \overline{XY}$

Prove:  $\triangle ABC \cong \triangle XYZ$  using the AAS Postulate

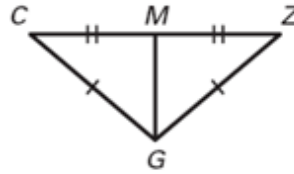
18.

- $\angle A \cong$  \_\_\_\_\_
- $\angle B \cong$  \_\_\_\_\_
- $\angle C \cong$  \_\_\_\_\_
- $\overline{AB} \cong$  \_\_\_\_\_
- $\overline{BC} \cong$  \_\_\_\_\_
- $\overline{CA} \cong$  \_\_\_\_\_



19. Complete the proof.

Prove that the two triangles are congruent.

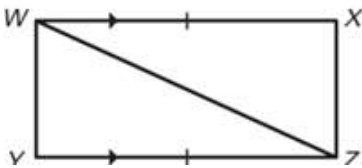


20. Complete the proof.

Given:  $WX \parallel YZ$

Prove:  $\triangle WYZ \cong \triangle ZXW$

Statements \_\_\_\_\_ Reasons \_\_\_\_\_

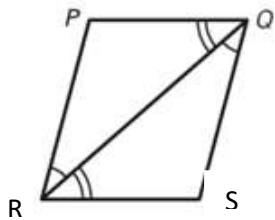


21. Complete the proof.

Given:  $\angle PQR \cong \angle SRQ$ ,  $\angle PRQ \cong \angle SQR$

Prove:  $\triangle PQR \cong \triangle SRQ$

Statements \_\_\_\_\_ Reasons \_\_\_\_\_

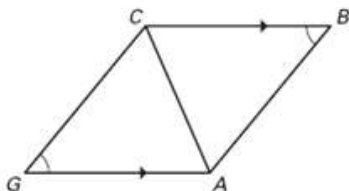


22. Complete the proof.

Given:  $\angle G \cong \angle B$ ,  $\overline{CB} \parallel \overline{GA}$

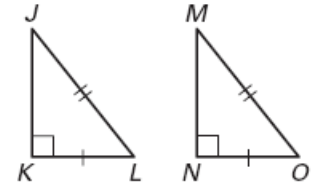
Statements \_\_\_\_\_ Reasons \_\_\_\_\_

Prove:  $\triangle GCA \cong \triangle BAC$



23. Write a two column proof.

Given:  $JL \cong MO$ ,  $KL \cong NO$ ,  $\angle K$  and  $\angle N$  are right angles Prove:  $\triangle JKL \cong \triangle MNO$

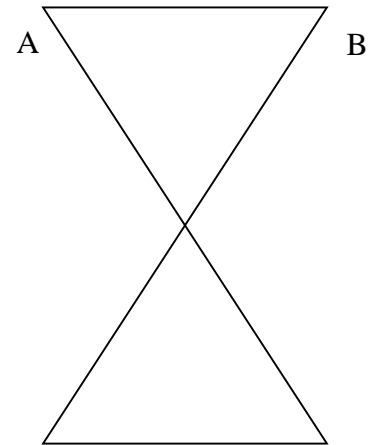


Statements	Reasons

24. Write a two column proof.

Given:  $\overline{AC} \cong \overline{EC}$ ,  $\overline{BC} \cong \overline{DC}$

Prove:  $\triangle ABC \cong \triangle EDC$

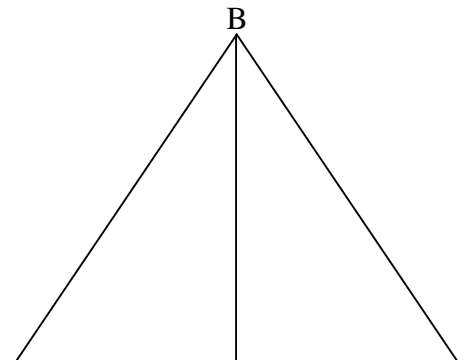


Statements	Reasons

25. Write a two column proof.

Given: D is the midpoint of  $\overline{AC}$ ,  $\overline{AB} \cong \overline{CB}$

Prove:  $\triangle ABD \cong \triangle CBD$



Statements	Reasons

## Unit 4 Review Answer Key

1. 1 & 5, 2 & 6, 3 & 7, 4 & 8
2. 1 & 4, 2 & 3, 6 & 7, 5 & 8
3. 3 & 6, 4 & 5
4. 1 & 8, 2 & 7
5. 3 & 5, 4 & 6
6. 4, 5, 8 and 3, 6, 7
7.  $X = 17$ ,  $y = 17$
8.  $A = 9$ ,  $b = 8$
9. 9. Yes, ASA, AAS, SAS, SSS, or HL. EG is reflexive.
10. Yes, ASA, SAS, AAS, SSS, or HL. YW is reflexive.
11. SSS. MG is reflexive
12. SAS
13. ASA
14. AAS
15. HL
16.  $\angle A = \angle X$
17.  $\angle C = \angle Z$
18. R, G, RG, GX, XR
19.  $CM = MZ$ ,  $GC = GZ$ , Triangle GMC = Triangle GMZ
20.  $WX = ZY$  Given,  $\angle XWZ = \angle YZW$  Alternate Interior Angles are Congruent,  $WZ = ZW$  Given, Triangle WYZ = Triangle ZXW SAS
21.  $\angle PQR = \angle SRQ$  Given,  $RQ = QR$  Reflexive,  $\angle PRQ = \angle SQR$  Given, ASA
22.  $\angle G = \angle B$  Given,  $\angle BCA = \angle GAC$  Alternate Interior Angles are Congruent,  $CA = AC$  Reflexive, Triangle GCA = Triangle BAC AAS
23.  $JL = MO$  Given,  $KL = NO$  Given,  $\angle K$  &  $\angle N$  are right angles Given,  $\angle K = \angle N$ , all right angles are congruent, Triangle JKL = Triangle MNO HL
24.  $AC = EC$  Given,  $BC = DC$  Given,  $\angle C = \angle C$  Vertical Angles, Triangle ABC = Triangle EDC SAS
25. D is the midpoint of AC Given,  $AD = DC$  Definition of Midpoint,  $AB = CB$  Given,  $BD = BD$  Reflexive, Triangle ABD = Triangle EDC SSS