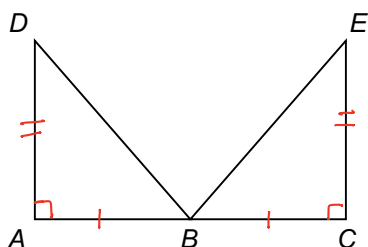Name: _____ Key _____ Date: _____ Period: _____
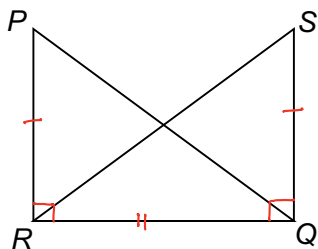
Geometry Bundle 7 Test Review

1. In the diagram below, B is the midpoint of $\overline{AC}$, $\overline{DA} \perp \overline{AC}$, $\overline{EC} \perp \overline{AC}$, and $\overline{DA} \cong \overline{EC}$. Which theorem may be used to prove $\Delta DAB \cong \Delta ECB$?
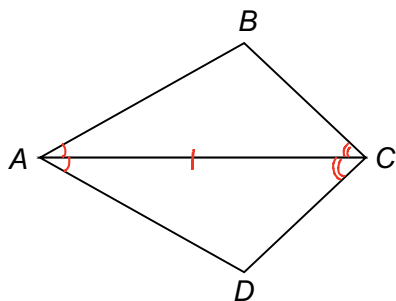
SAS

2. In the accompanying diagram, $\overline{PR} \cong \overline{SQ}$, $\overline{PR} \perp \overline{RQ}$, and $\overline{SQ} \perp \overline{RQ}$. Which theorem can be used to prove that $\Delta PQR \cong \Delta SRQ$?
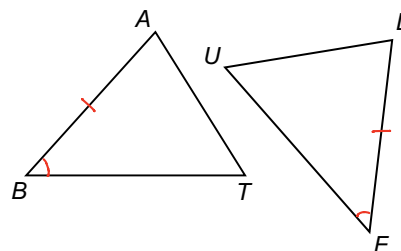
SAS

3. In the diagram of quadrilateral $ABCD$, diagonal $\overline{AC}$ bisects $\angle BAD$ and $\angle BCD$. Which theorem can be used to prove that $\Delta ABC \cong \Delta ADC$? (G.10B)

ASA

4. In the diagram of triangles BAT and FLU, $\angle B \cong \angle F$ and $\overline{BA} \cong \overline{FL}$. Which statement do you needed to prove $\Delta BAT \cong \Delta FLU$ Angle-Side-Angle(ASA)?

$\angle A \cong \angle L$

5. If $\Delta JKL \cong \Delta MNO$, identify all pairs of congruent corresponding parts. (Draw your own picture)

$\angle J \cong \angle M$ $\overline{JK} \cong \overline{MN}$

$\angle K \cong \angle N$ $\overline{KL} \cong \overline{NO}$

$\angle L \cong \angle O$ $\overline{JL} \cong \overline{MO}$

6. In the diagram below, $\Delta ABC \cong \Delta XYZ$. Identify all pairs of congruent corresponding parts.
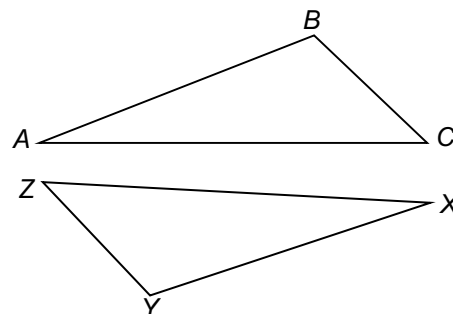
$\angle A \cong \angle X$

$\angle B \cong \angle Y$

$\angle C \cong \angle Z$
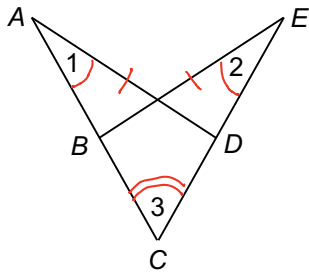
$\overline{AB} \cong \overline{XY}$

$\overline{BC} \cong \overline{YZ}$

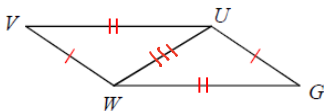$\overline{AC} \cong \overline{XZ}$

7. Complete the proof.

Given: $\overline{AD} \cong \overline{EB}$ and $\angle 1 \cong \angle 2$
Prove: $\angle ADC \cong \angle EBC$

Statement	Reason
1. $\overline{AD} \cong \overline{EB}$	1. Given
2. $\angle 1 \cong \angle 2$	2. Given
3. $\angle E \cong \angle E$	3. Refl. prop. $\cong$
4. $\Delta ACD \cong \Delta ECB$	4. AAS
5. $\angle ADC \cong \angle EBC$	5. CPCTC

8. Complete the proof.
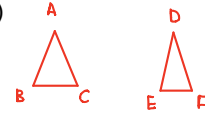
Given: $\overline{VW} \cong \overline{GU}$, $\overline{VU} \cong \overline{GW}$
Prove: $\angle V \cong \angle G$

Statement	Reason
1. $\overline{VW} \cong \overline{GU}$	1. Given
2. $\overline{VU} \cong \overline{GW}$	2. Given
3. $\overline{WU} \cong \overline{UW}$	3. Refl. prop. $\cong$
4. $\Delta VWU \cong \Delta GUW$	4. SSS
5. $\angle V \cong \angle G$	5. CPCTC

9. Give an example of enough information to prove that $\Delta ABC \cong \Delta DEF$ using the Angle-Angle-Side (AAS) Congruence Theorem.
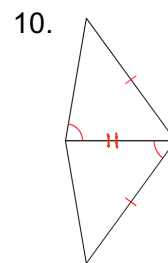(hint: Draw a picture)
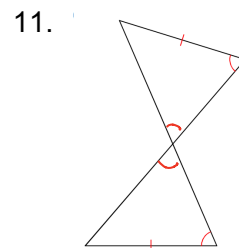

$\angle A \cong \angle D$

$\angle B \cong \angle E$
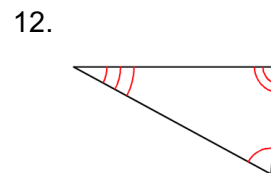
$\overline{BC} \cong \overline{EF}$

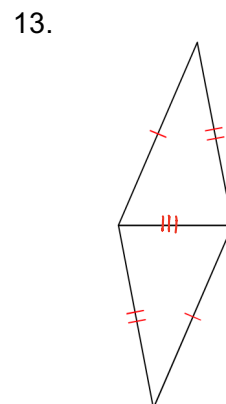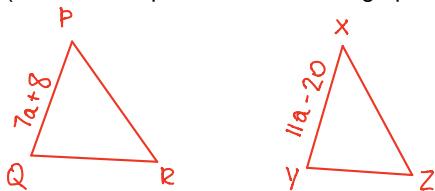**For problems 12 – 15, select the theorem that can be used to prove the triangles congruent.**

10.

11.

AAS

12.

13.

SSS

Bundle 7 Test Review.docx pg. 2

14. If $\Delta PQR \cong \Delta XYZ$, $PQ = 7a + 8$, and
$XY = 11a -20$. Find a and PQ.
(hint: draw a picture before setting up the equation)

$$7a+8 = 11a-20$$
$$-7a \qquad -7a$$
$$8 = 4a-20$$
$$+20 \qquad +20$$
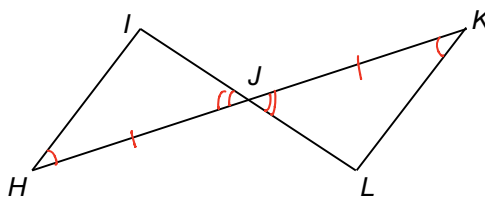$$\frac{28}{4} = \frac{4a}{4} \qquad \boxed{a=7}$$

15. Complete the proof.

Given: E is the midpoint of $\overline{AB}$, and
$\angle A \cong \angle B$.
Prove: $\Delta ADE \cong \Delta BCE$
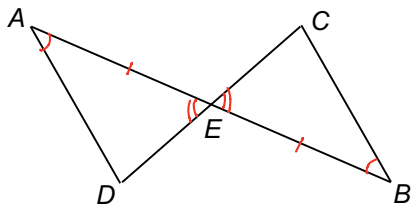
Statement	Reason
1. E is the midpoint of $\overline{AB}$	1. Given
2. $\angle A \cong \angle B$	2. Given
3. $\overline{AE} \cong \overline{EB}$	3. Def. of midpoint
4. $\angle AED \cong \angle BEC$	4. Def. of vert. $\angle$
5. $\Delta ADE \cong \Delta BCE$	5. ASA

16. Given: $\overline{HK}$ bisects $\overline{IL}$ and $\angle H \cong \angle K$
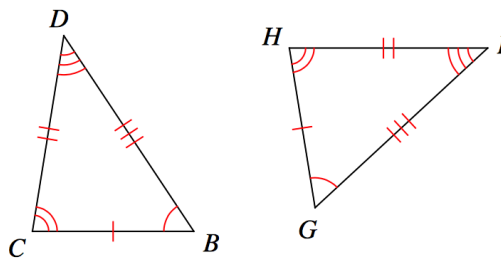Prove: $\Delta HIJ \cong \Delta KLJ$

Statement	Reason
1. $\overline{HK}$ bisects $\overline{IL}$	1. Given
2. $\overline{HJ} \cong \overline{KJ}$	2. Def Seg bisector
3. $\angle H \cong \angle K$	3. Given
4. $\angle IJH \cong \angle KJL$	4. Vertical $\angle$s are $\cong$
5. $\Delta HIJ \cong \Delta KLJ$	5. ASA

17. Complete each congruence statement by
naming the corresponding angle or side.
$\Delta WVU \cong \Delta GHI$
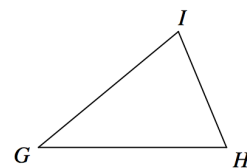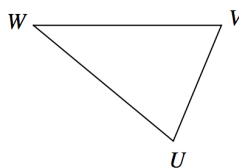
$\angle W \cong$? $\angle G$
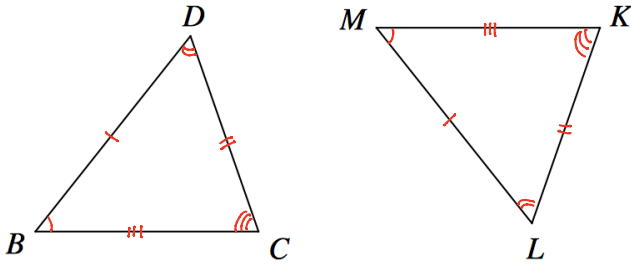
18. Write a statement that indicates that the
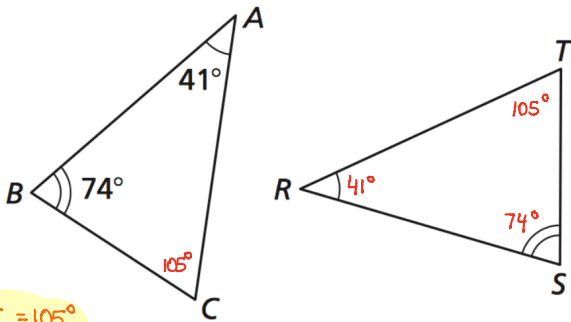triangles in each pair are congruent.

$\Delta BCD \cong \Delta GHI$

19. Mark the angles and sides of each pair of triangles to indicate that they are congruent.

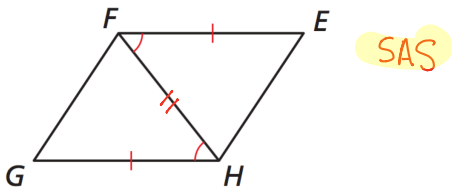$\triangle BDC \cong \triangle MLK$

20. Find $m\angle C$.

180
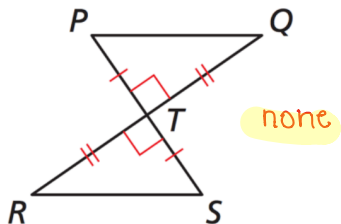- 74
- 41
―――
105°

$m\angle C = 105°$

For 21-26, state if the two triangles are congruent. If they are, state how you know. (SSS, ASA, SAS, AAS, or HL)

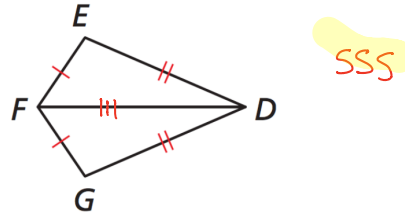21. $\triangle EFH, \triangle GHF$
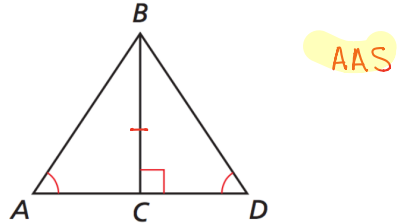

SAS

22. $\triangle PQT, \triangle SRT$

Bundle 7 Test Review docx pg 4

23. $\triangle DEF \cong \triangle DGF$

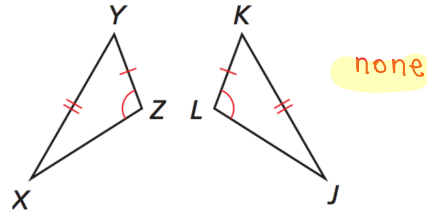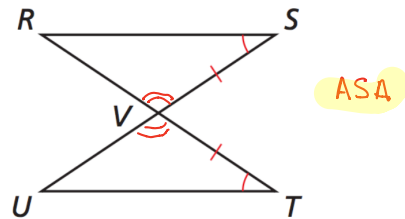SSS

24. $\triangle ABC, \triangle DBC$
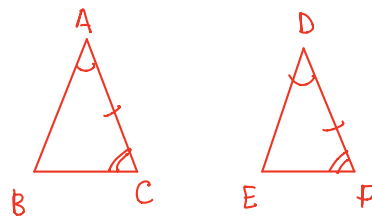

AAS

25. $\triangle XYZ, \triangle JKL$

26. $\triangle RSV, \triangle UTV$

ASA

27. Decide whether you can use the given information to prove that $\triangle ABC \cong \triangle DEF$.

$\angle A \cong \angle D. \angle C \cong \angle F. \overline{AC} \cong \overline{DF}$

yes, because ASA