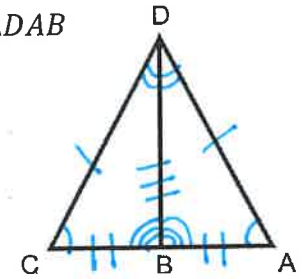
Name: Key Class: _____

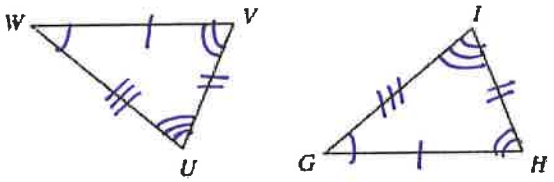
Math 2: Unit 8 Review Sheet

Part 1: Label the triangles correctly based on their congruent corresponding sides and angles.

1. $\Delta DCB \cong \Delta DAB$

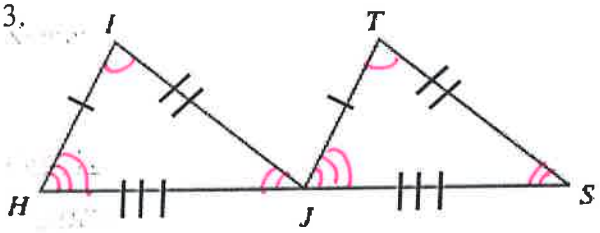


2. $\Delta WVU \cong \Delta GHI$



Part 2: Write out the congruent sides and the congruent angles. Make sure you write all of them!

3.



$\angle I \cong \angle T$
$\angle IJH \cong \angle TSJ$
$\angle H \cong \angle TJS$

$\overline{HI} \cong \overline{JT}$
$\overline{IJ} \cong \overline{TS}$
$\overline{JH} \cong \overline{SJ}$

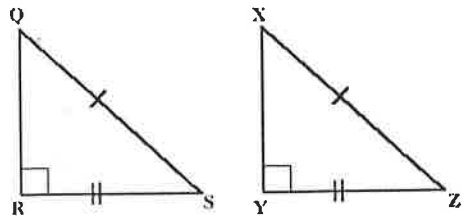
4. $\Delta USA \cong \Delta ESP$

$\angle U \cong \angle E$
$\angle S \cong \angle S$
$\angle A \cong \angle P$

$\overline{US} \cong \overline{ES}$
$\overline{SA} \cong \overline{SP}$
$\overline{UA} \cong \overline{EP}$

Part 3: Determine which Postulate or Theorem (SSS, SAS, ASA, AAS, HL) proves that the triangles are congruent. If none of those 5 work, write NONE in both blanks!

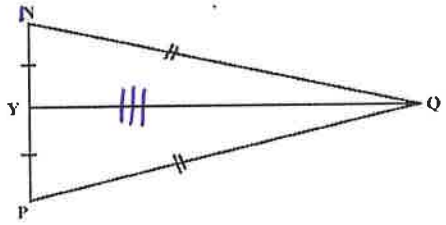
5.



$\Delta QSR \cong \Delta$ XZY

Reason: HL ≅ Thm

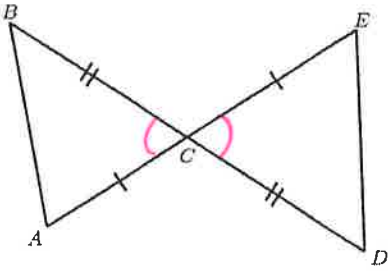
6.



$\Delta NYQ \cong \Delta$ PYQ

Reason: SSS ≅ Post.

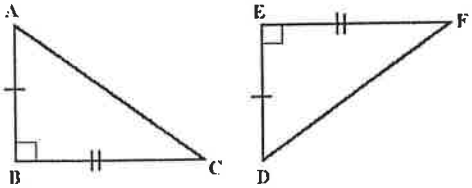
7.



$\Delta CAB \cong \Delta$ CED

Reason: SAS ≅ Post.

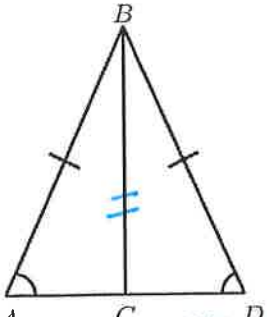
8.



$\Delta BAC \cong \Delta$ EDF

Reason: SAS ≅ Post.

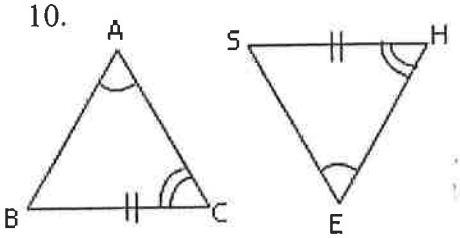
9.



$\Delta BCA \cong \Delta$ NONE

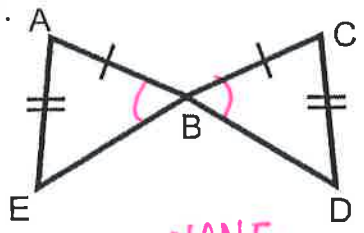
Reason: NONE

10.



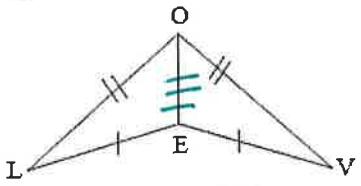
$\Delta ABC \cong \Delta$ ESH

Reason: AAS ≅ Thm

11. 

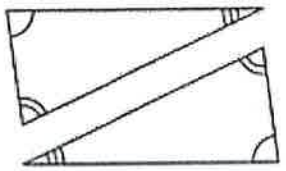
$\Delta BAE \cong \Delta$ NONE

Reason: NONE

12. 

$\Delta OEL \cong \Delta$ OEV

Reason: SSS ≅ Post.

13. 

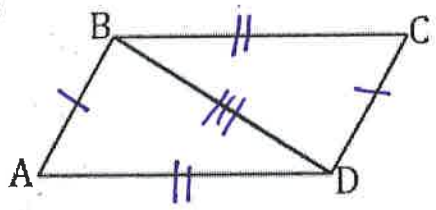
$\Delta HYK \cong \Delta$ NONE

Reason: NONE

Part 4: **Fill in the missing blanks in each of the following proofs:**

14. *Given:* $\overline{AB} \cong \overline{CD}$, $\overline{BC} \cong \overline{DA}$

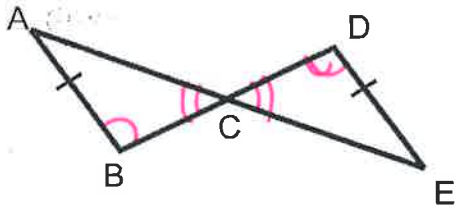
Prove: $\Delta ABD \cong \Delta CDB$



Statements	Reasons
1. $\overline{AB} \cong \overline{CD}$	1. given
2. $\overline{BC} \cong \overline{DA}$	2. given
3. $\overline{BD} \cong \overline{DB}$	3. Reflexive Prop. of ≅
4. $\Delta ABD \cong \Delta CDB$	4. SSS ≅ Postulate

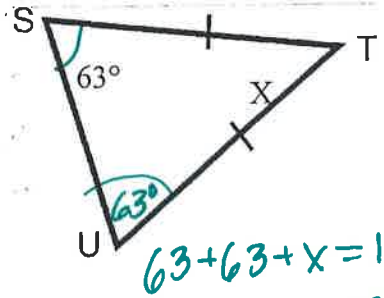
15. *Given:* $\overline{AB} \cong \overline{ED}$, $\angle B \cong \angle D$

Prove: $\Delta ABC \cong \Delta EDC$



Statements	Reasons
1. $\overline{AB} \cong \overline{ED}$	1. given
2. $\angle B \cong \angle D$	2. given
3. $\angle ACB \cong \angle ECD$	3. vertical angles are ≅
4. $\Delta ABC \cong \Delta EDC$	4. AAS ≅ Theorem

Part 5: **Find the missing variable in each of the following. YOU SHOULD ALSO STUDY THE NOTES PAGE FOR ISOSCELES TRIANGLES!** ☺

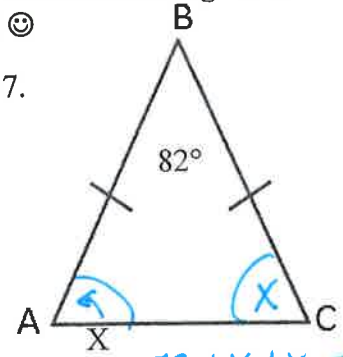
16. 

63+63+X=180

126+X=180

X=54

X = 54°

17. 

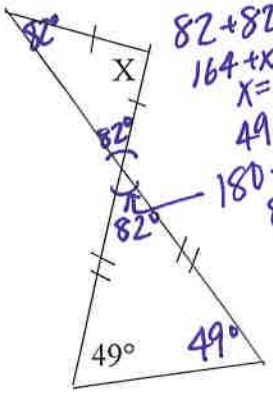
82+X+X=180

2X+82=180

2X=98

X=49

X = 49°

18. 

82+82+X=180

164+X=180

X=16

49+49=98

180−98

82

X = 16°