Quiz 3.6: Proving the Congruence of Triangles

Multiple Choice: *Choose the letter that corresponds to the correct answer. Write the answer in your answer sheet.*

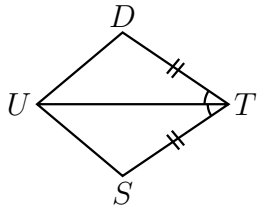
1. Which theorem states that if the legs of one right triangle are congruent to the legs of another right triangle, then the triangles are congruent?

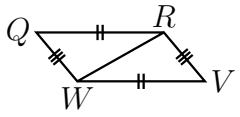
   A. HA Congruence Theorem
   C. LA Congruence Theorem
   B. HL Congruence Theorem
   D. LL Congruence Theorem

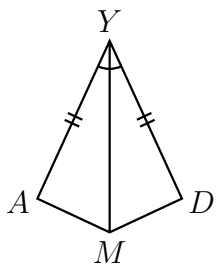
2. "If two angles and a non-included side of one triangle are congruent to the corresponding two angles and a non-induded side of another triangle, then the triangles are congruent." This is stated in:

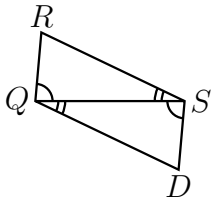
   A. AAS Congruence Theorem
   C. HL Congruence Theorem
   B. LL Congruence Theorem
   D. LA Congruence Theorem

3. Which of the following pairs of triangles are congruent and can be proved by ASA Postulate?

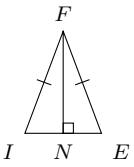
   A.
   

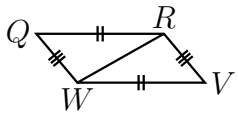
   B.
   

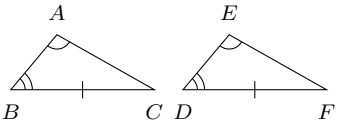
   C.
   

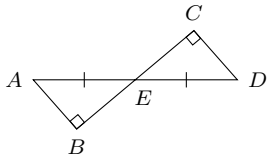
   D.
   

4. Which of the following pairs of triangles are congruent and can be proved by HL Theorem?

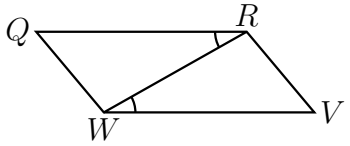
   A.
   

   C.
   

   B.
   

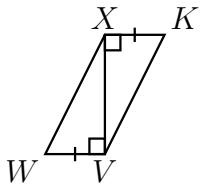
   D.
   

5. In the figure at the right, $\angle QRW \cong \angle VWR$. What additional data is needed to prove that $\triangle QRW \cong \triangle VWR$ by SAS Postulate?

   A. $\overline{QW} \cong \overline{VR}$
   B. $\overline{RQ} \cong \overline{WV}$
   C. $\angle Q \cong \angle V$
   D. $\angle QWR \cong \angle VRW$

6. In the figure at the right, $\overline{WV} \cong \overline{KX}$. What additional data is needed to prove that $\triangle XVW \cong \triangle VXK$ by SSS Congruence?

   A. $\overline{XV} \cong \overline{XV}$
   B. $\overline{WX} \cong \overline{KV}$
   C. $\angle W \cong \angle K$
   D. $\angle XVW \cong \angle VXK$

Answer Key

1. Which theorem states that if the legs of one right triangle are congruent to the legs of another right triangle, then the triangles are congruent?

   Solution:

   A. HA Congruence Theorem
   C. LA Congruence Theorem
   B. HL Congruence Theorem
   D. LL Congruence Theorem

2. "If two angles and a non-included side of one triangle are congruent to the corresponding two angles and a non-induded side of another triangle, then the triangles are congruent." This is stated in:

   Solution:

   A. AAS Congruence Theorem
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   B. LL Congruence Theorem
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3. Which of the following pairs of triangles are congruent and can be proved by ASA Postulate?

   Solution:

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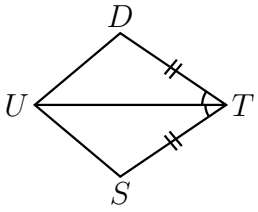
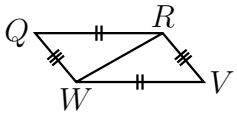
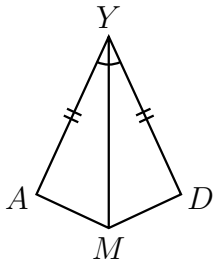
   

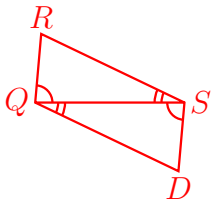
   B.

   C.

   D.

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   Solution:

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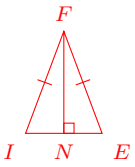
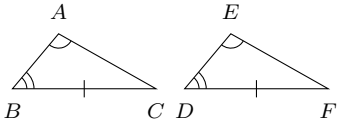
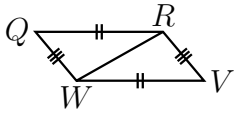
   

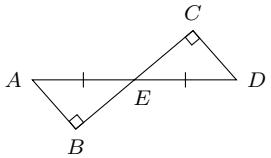
   B.

   C.

   D.

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   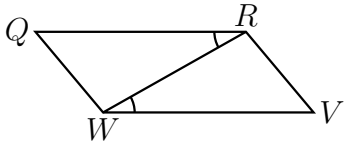

   Solution:

   A. $\overline{QW} \cong \overline{VR}$
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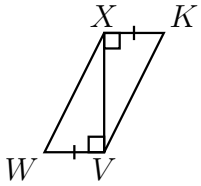

Solution:

A. $\overline{XV} \cong \overline{XV}$ B. $\overline{WX} \cong \overline{KV}$ C. $\angle W \cong \angle K$ D. $\angle XVW \cong \angle VXK$