

# 4-7

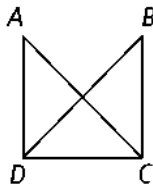
## Practice

Form G

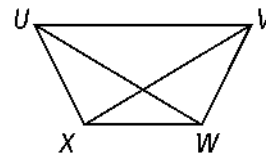
### Congruence in Overlapping Triangles

In each diagram in Exercises 7–12 the given triangles are congruent. Identify their common side or angle.

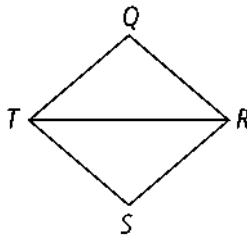
7.  $\triangle ADC$  and  $\triangle BCD$



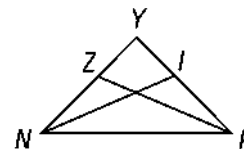
9.  $\triangle UXV$  and  $\triangle VWU$



10.  $\triangle QTR$  and  $\triangle SRT$



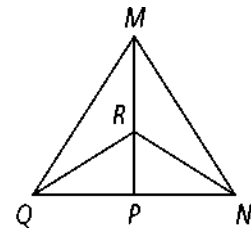
12.  $\triangle YNI$  and  $\triangle YPZ$



15. Write a paragraph proof.

**Given:**  $P$  is the midpoint of  $\overline{QN}$ ,  $\overline{MP} \perp \overline{QN}$

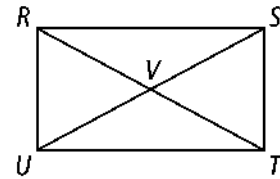
**Prove:**  $\triangle MRQ \cong \triangle MRN$



14. Complete the following proof.

**Given:**  $\overline{RU} \cong \overline{TS}$ ,  $\angle RUT$  and  $\angle UTS$  are right angles,  $V$  is the midpoint of  $US$ .

**Prove:**  $\square RVU \cong \square TVS$



Statements	Reasons
1) $\overline{RU} \cong \overline{TS}$ , $\angle RUT$ and $\angle UTS$ are right angles, $V$ is the midpoint of $\overline{US}$ .	1) <u>?</u>
2) $\overline{UT} \cong \overline{TU}$	2) <u>?</u>
3) <u>?</u>	3) All right angles are congruent
4) <u>?</u>	4) SAS
5) $\angle RUS$ and $\angle SUT$ are complementary angles.	5) <u>?</u>
6) <u>?</u>	6) Definition of complementary angles
7) $\angle SUT \cong \angle RTU$	7) <u>?</u>
8) $\angle RUS \cong \angle STR$	8) <u>?</u>
9) <u>?</u>	9) Definition of midpoint
10) $\angle RVU \cong \angle TVS$	10) <u>?</u>
11) $\square RVU \cong \square TVS$	11) <u>?</u>