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## Practice 3-2

**Proving Lines Parallel** 

1. Developing Proof Complete the paragraph proof for the figure shown.

Given:  $\angle RQT$  and  $\angle QTS$  are supplementary.  $\angle TSV$  and  $\angle SVU$  are supplementary. Prove:  $\overrightarrow{QR} \parallel \overleftarrow{UV}$ 

**Proof** Because  $\angle RQT$  and  $\angle QTS$  are supplementary,  $\angle RQT$  and  $\angle QTS$  are **a**. ? angles. By the Same-Side Interior Angles Theorem, **b**. ? || **c**. ?. Because  $\angle TSV$  and  $\angle SVU$  are supplementary,  $\angle TSV$  and  $\angle SVU$  are **d**. ? angles. By the **e**. ? Theorem,  $\overrightarrow{TS} \parallel \overrightarrow{UV}$ . Because  $\overrightarrow{QR}$  and  $\overrightarrow{UV}$  both are parallel to **f**. ?,  $\overrightarrow{QR} \parallel \overrightarrow{UV}$  by Theorem **g**. ?.



## Which lines or segments are parallel? Justify your answer with a theorem or postulate.

G

9.



2.



65



Н





Algebra Find the value of x for which  $a \parallel t$ .

 $(x + 44)^{\circ}$ 

8.









