Name _____ Class _____ Date _____

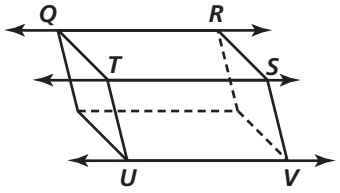
Practice 3-2

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.

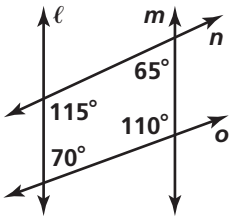
Prove: $\overleftrightarrow{QR} \parallel \overleftrightarrow{UV}$



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.** ? $\parallel$ **c.** ?. Because $\angle TSV$ and $\angle SVU$ are supplementary, $\angle TSV$ and $\angle SVU$ are **d.** ? angles. By the **e.** ? Theorem, $\overleftrightarrow{TS} \parallel \overleftrightarrow{UV}$. Because $\overleftrightarrow{QR}$ and $\overleftrightarrow{UV}$ both are parallel to **f.** ?, $\overleftrightarrow{QR} \parallel \overleftrightarrow{UV}$ by Theorem **g.** ?.

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

2.



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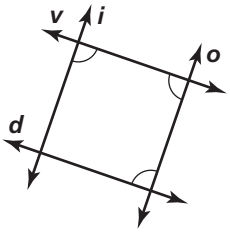

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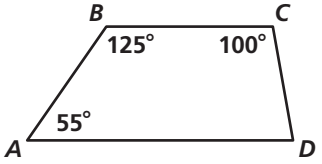

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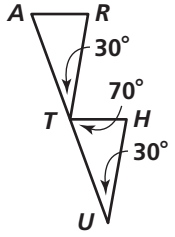

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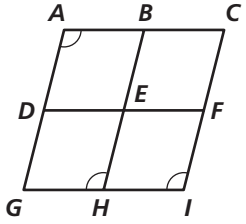

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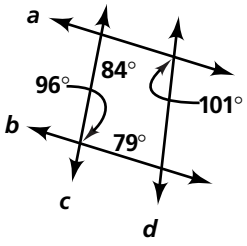
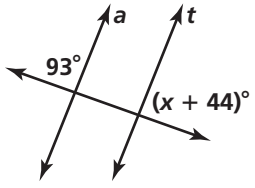


Algebra **Find the value of x for which $a \parallel t$.**

8.



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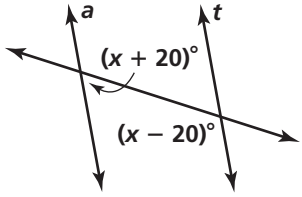

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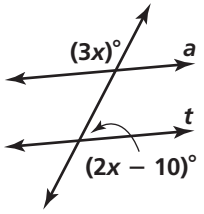

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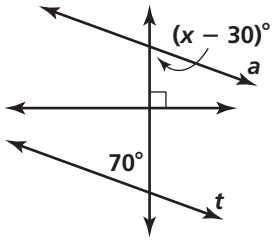

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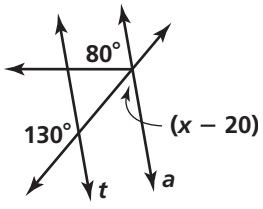

13.