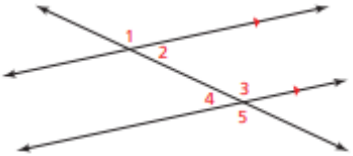
Review Properties of Special Angles in Parallel lines

Vocabulary and Core Concept Check

1. **WRITING** How are the Alternate Interior Angles Theorem and the Alternate Exterior Angles Theorem alike? How are they different?

2. **WHICH ONE DOESN'T BELONG?** Which pair of angle measures does *not* belong with the other three? Explain.

$m\angle 1$ and $m\angle 3$ | $m\angle 2$ and $m\angle 4$ | $m\angle 2$ and $m\angle 3$ | $m\angle 1$ and $m\angle 5$



Monitoring Progress and Modeling with Mathematics

In Exercises 3–6, find $m\angle 1$ and $m\angle 2$. Tell which theorem you use in each case. *(See Example 1.)*

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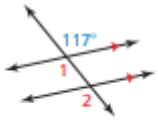

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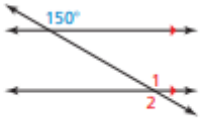

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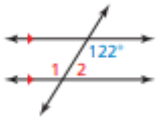

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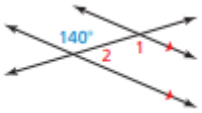

In Exercises 7–10, find the value of x. Show your steps. *(See Examples 2 and 3.)*

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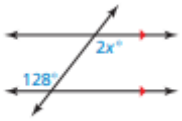

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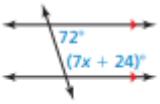

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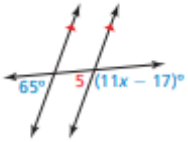

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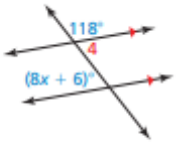
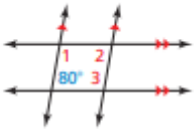


In Exercises 11 and 12, find $m\angle 1$, $m\angle 2$, and $m\angle 3$. Explain your reasoning.

11.


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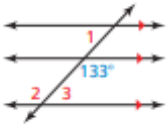
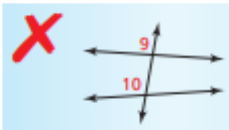


13. **ERROR ANALYSIS** Describe and correct the error in the student's reasoning.



$\angle 9 = \angle 10$ by the Corresponding Angles Theorem.