Lesson 14: More on the Angles of a Triangle

Classwork

Exercises 1–4

Use the diagram below to complete Exercises 1–4.



1. Name an exterior angle and the related remote interior angles.
2. Name a second exterior angle and the related remote interior angles.
3. Name a third exterior angle and the related remote interior angles.
4. Show that the measure of an exterior angle is equal to the sum of the related remote interior angles.

**Example 1**

Find the measure of angle $x$.

Example 2

Find the measure of angle $x$.

Example 3

****Find the measure of angle $x$

****Example 4

Find the measure of angle $x$.

Exercises 5–10

1. Find the measure of angle $x$. Present an informal argument showing that your answer is correct.



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Lesson Summary



The sum of the remote interior angles of a triangle is equal to the measure of the related exterior angle. For example, $∠CAB+∠ABC=∠ACE.$

Problem Set

For each of the problems below, use the diagram to find the missing angle measure. Show your work.

1. Find the measure of angle $x$. Present an informal argument showing that your answer is correct.



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1. Write an equation that would allow you to find the measure of angle $x$. Present an informal argument showing that your answer is correct.

