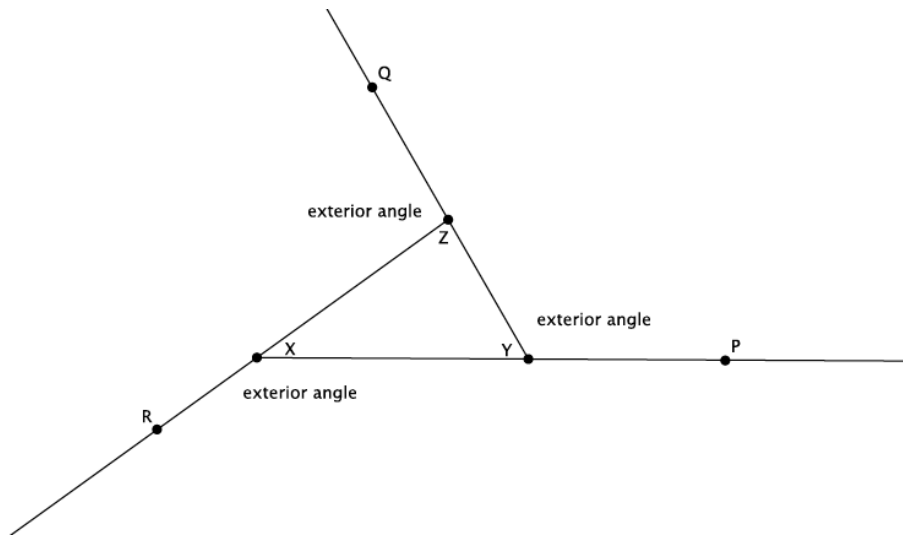


## Lesson 14: More on the Angles of a Triangle

### Classwork

#### Exercises 1–4

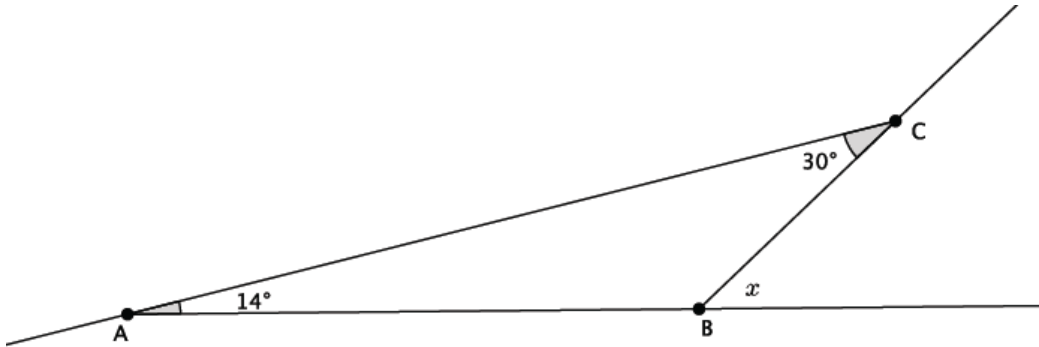
Use the diagram below to complete Exercises 1–4.



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.

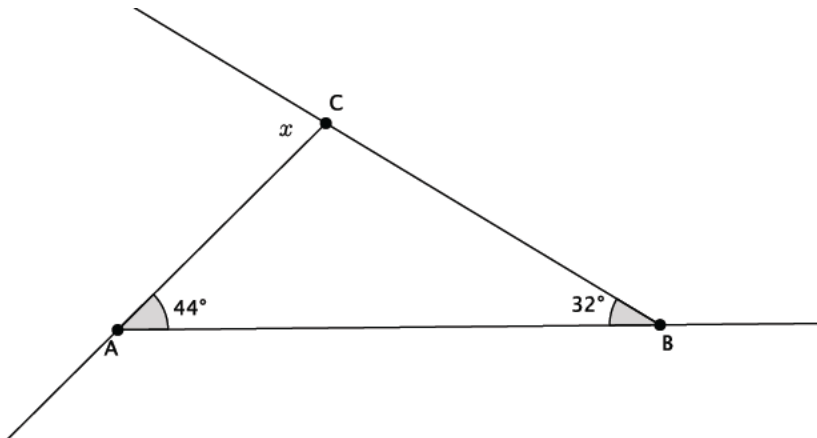
**Example 1**

Find the measure of angle  $x$ .



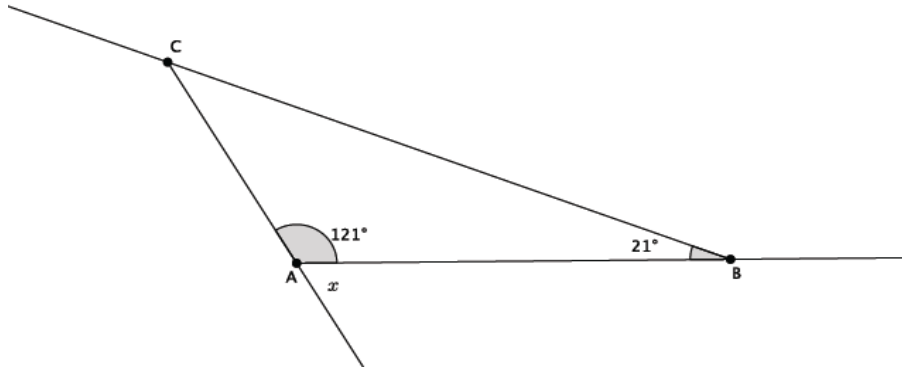
**Example 2**

Find the measure of angle  $x$ .



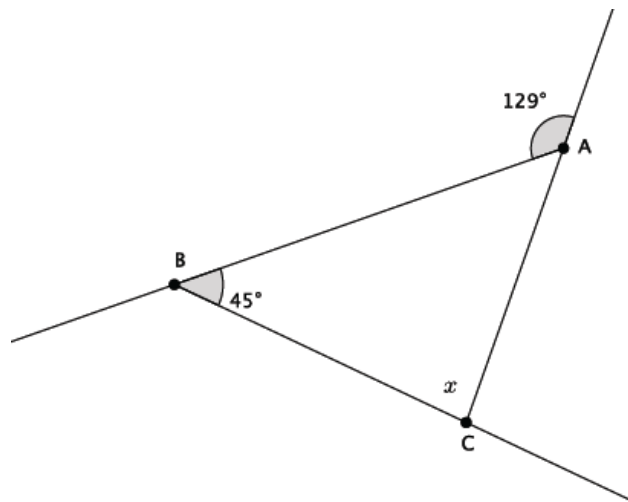
**Example 3**

Find the measure of angle  $x$ .



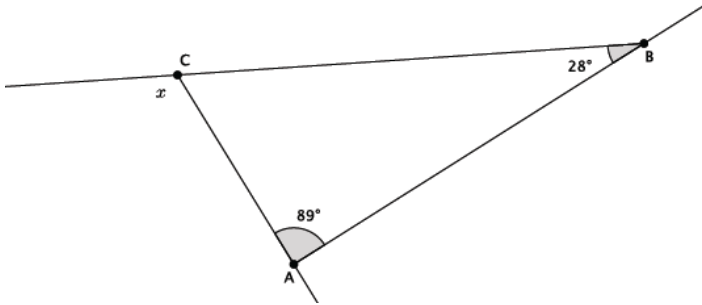
**Example 4**

Find the measure of angle  $x$ .

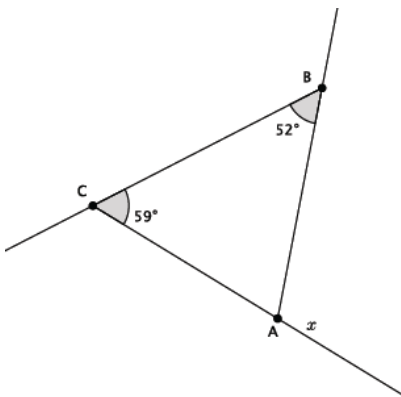


**Exercises 5–10**

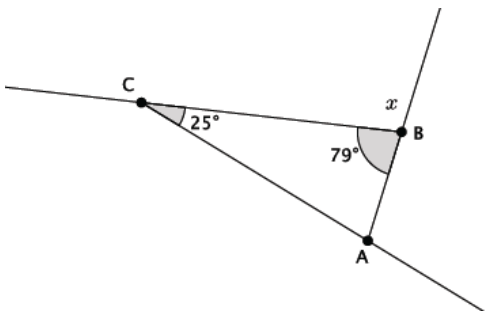
5. Find the measure of angle  $x$ . Present an informal argument showing that your answer is correct.



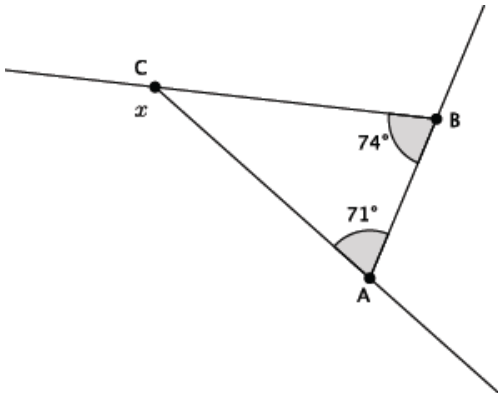
6. Find the measure of angle  $x$ . Present an informal argument showing that your answer is correct.



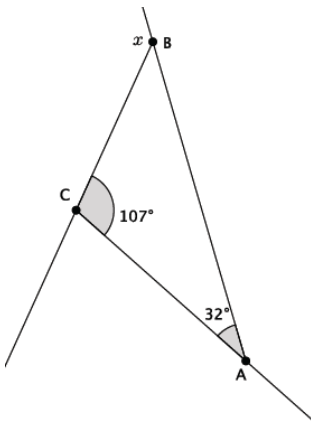
7. Find the measure of angle  $x$ . Present an informal argument showing that your answer is correct.



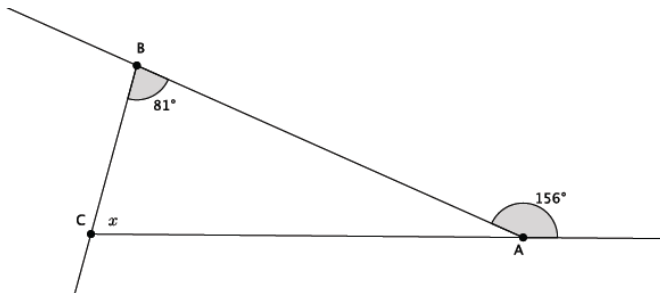
8. Find the measure of angle  $x$ . Present an informal argument showing that your answer is correct.



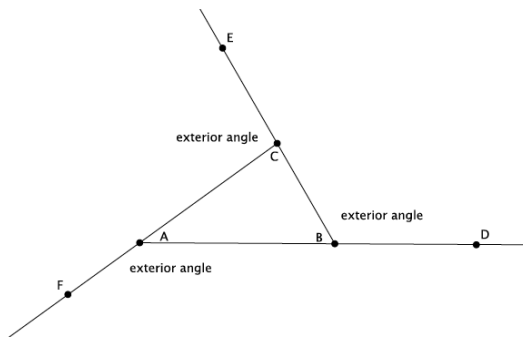
9. Find the measure of angle  $x$ . Present an informal argument showing that your answer is correct.



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



Lesson Summary

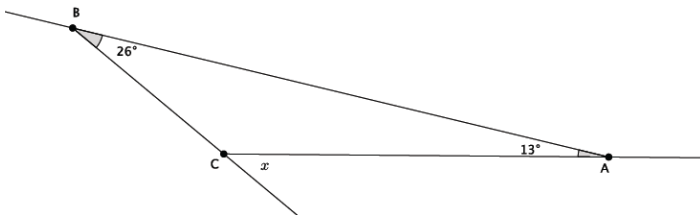


The sum of the remote interior angles of a triangle is equal to the measure of the exterior angle. For example,  $\angle CAB + \angle ABC = \angle ACE$ .

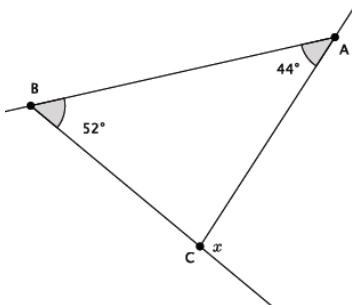
Problem Set

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

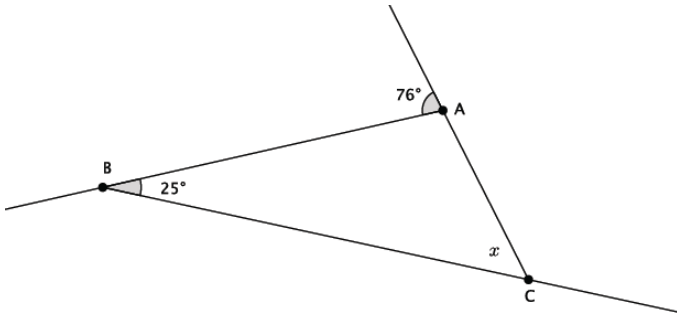
- Find the measure of angle  $x$ . Present an informal argument showing that your answer is correct.



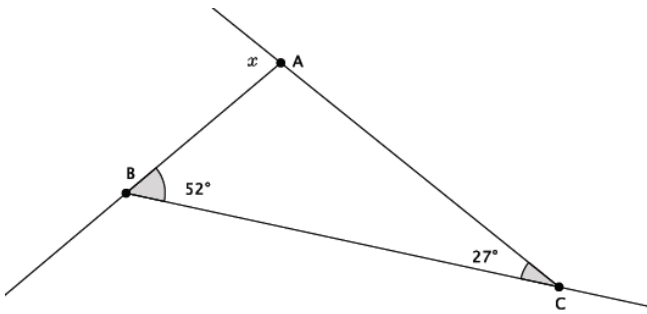
- Find the measure of angle  $x$ .



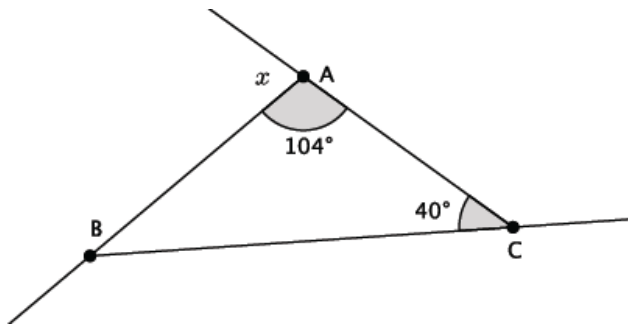
3. Find the measure of angle  $x$ . Present an informal argument showing that your answer is correct.



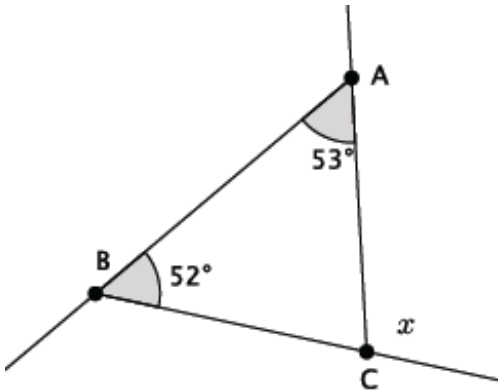
4. Find the measure of angle  $x$ .



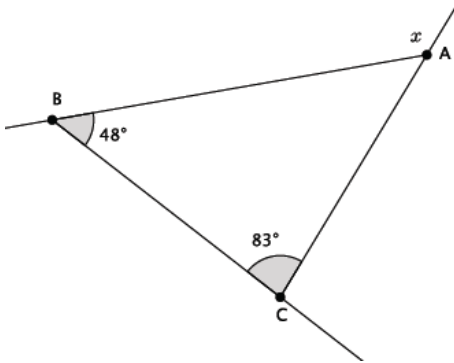
5. Find the measure of angle  $x$ .



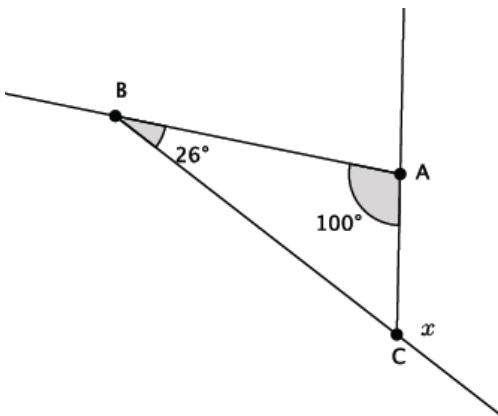
6. Find the measure of angle  $x$ .



7. Find the measure of angle  $x$ .

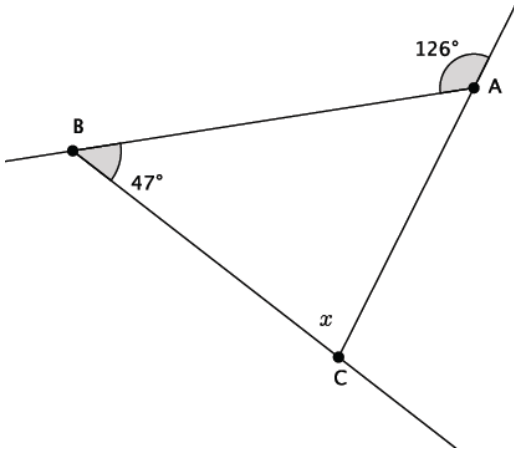


8. Find the measure of angle  $x$ .





9. Find the measure of angle  $x$ .



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

