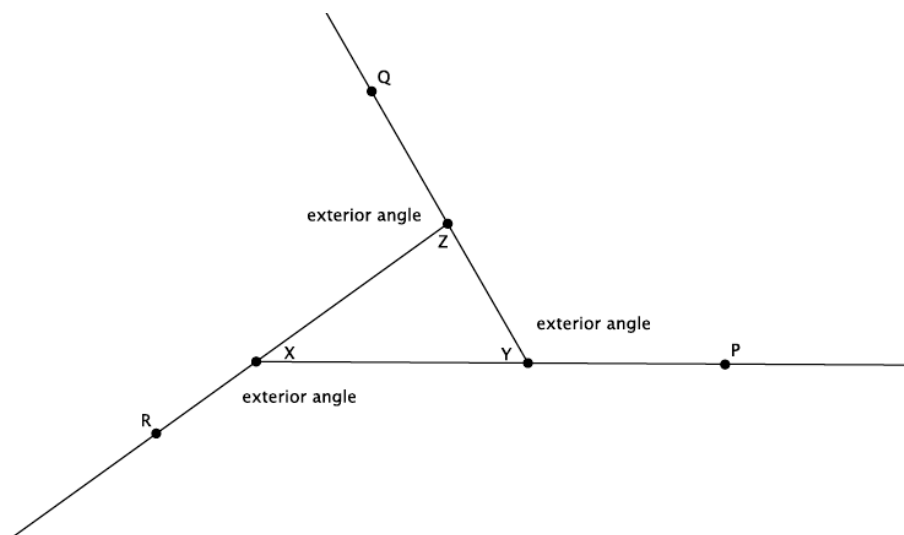


Lesson 14: More on the Angles of a Triangle

Classwork

Exercises 1–4

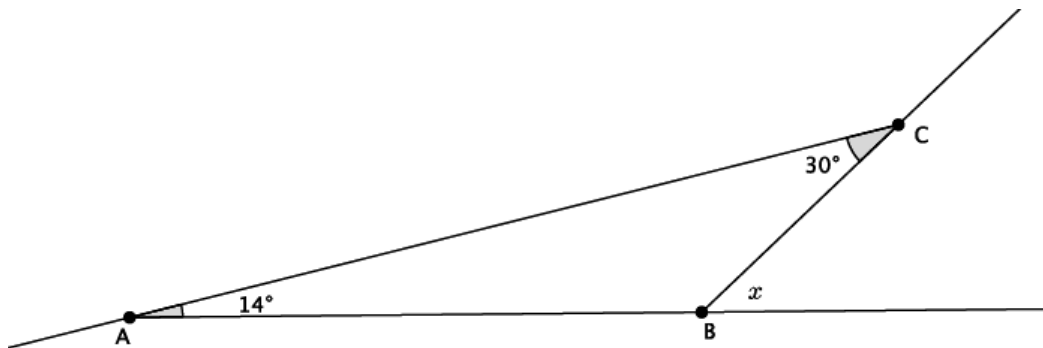
Use the diagram below to complete Exercises 1–4.



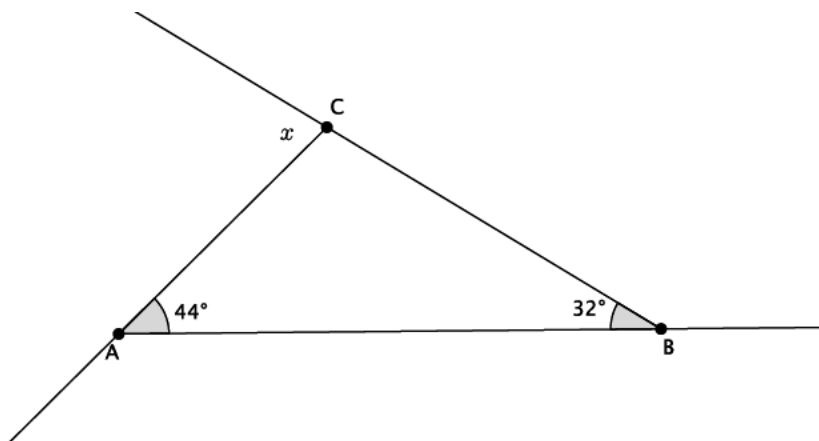
1. Name an exterior angle and the related remote interior angles.
2. Name a second exterior angle and the related remote interior angles.
3. Name a third exterior angle and the related remote interior angles.
4. Show that the measure of an exterior angle is equal to the sum of the measures of the related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

Example 1

Find the measure of angle x .

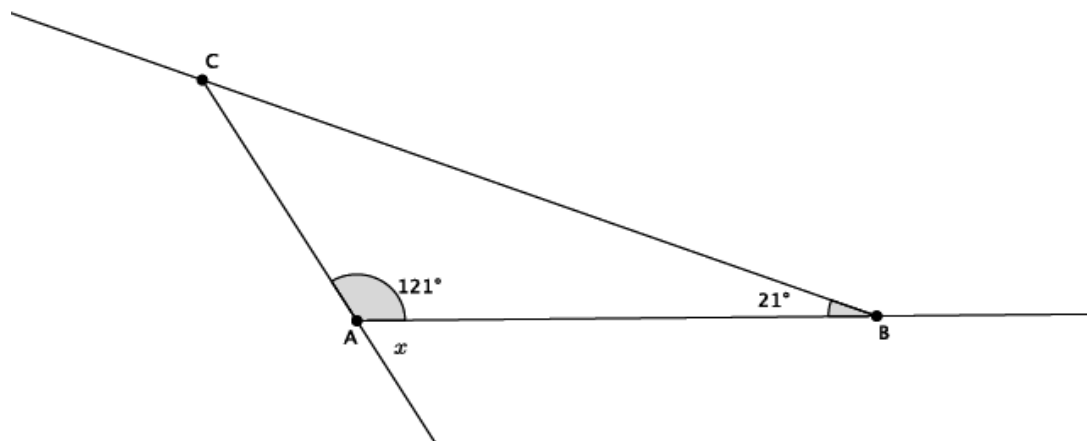
**Example 2**

Find the measure of angle x .

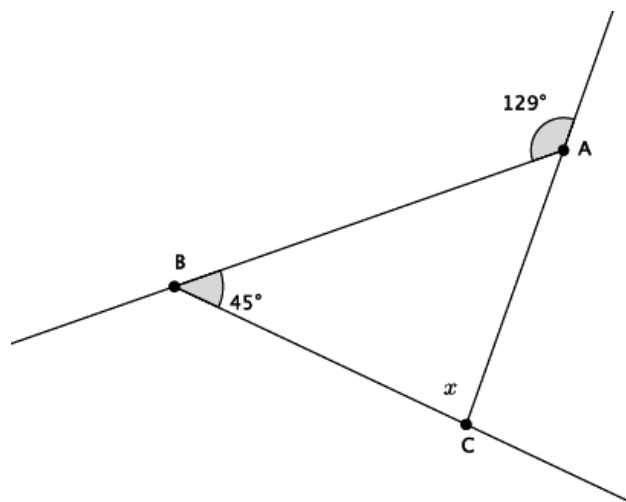


Example 3

Find the measure of angle x .

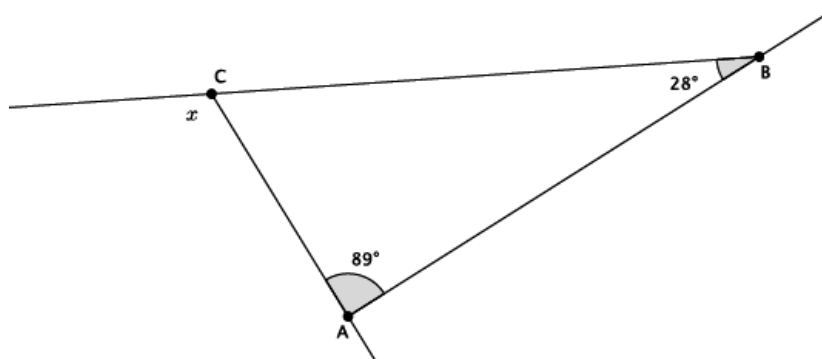
**Example 4**

Find the measure of angle x .

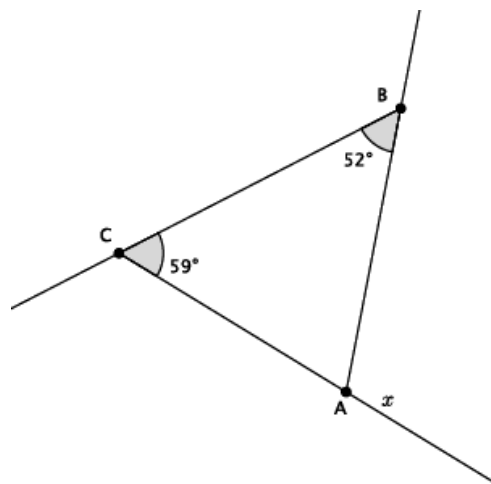


Exercises 5–10

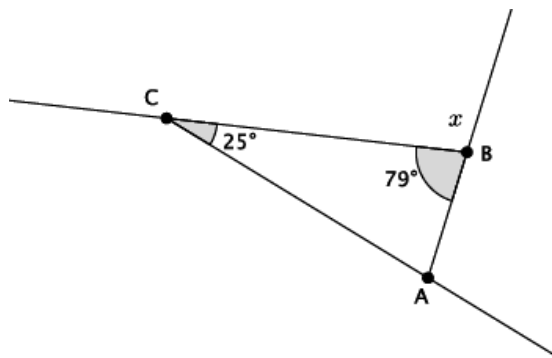
5. Find the measure of angle x . Present an informal argument showing that your answer is correct.



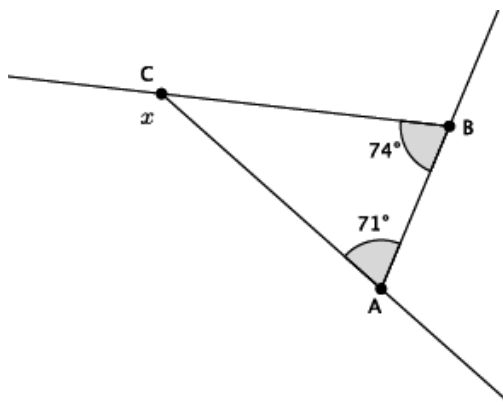
6. Find the measure of angle x . Present an informal argument showing that your answer is correct.



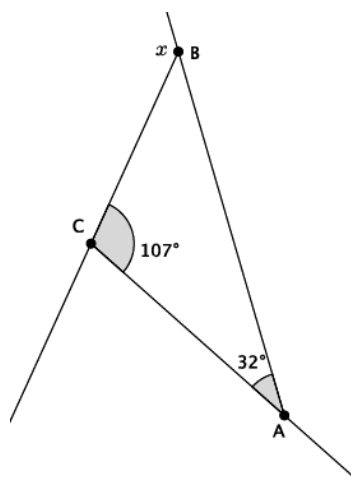
7. Find the measure of angle x . Present an informal argument showing that your answer is correct.



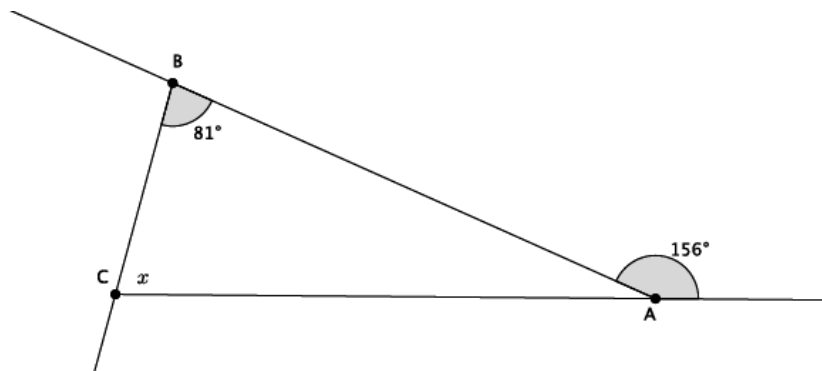
8. Find the measure of angle x . Present an informal argument showing that your answer is correct.



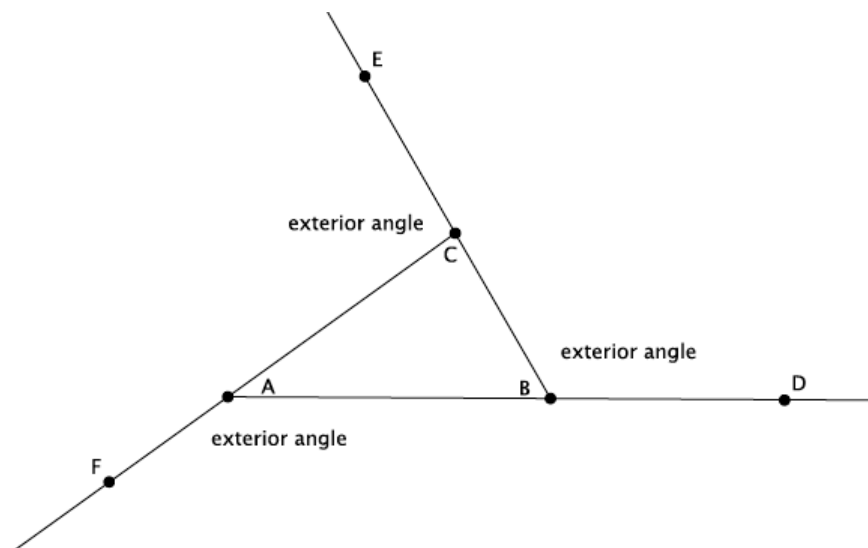
9. Find the measure of angle x . Present an informal argument showing that your answer is correct.



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



Lesson Summary

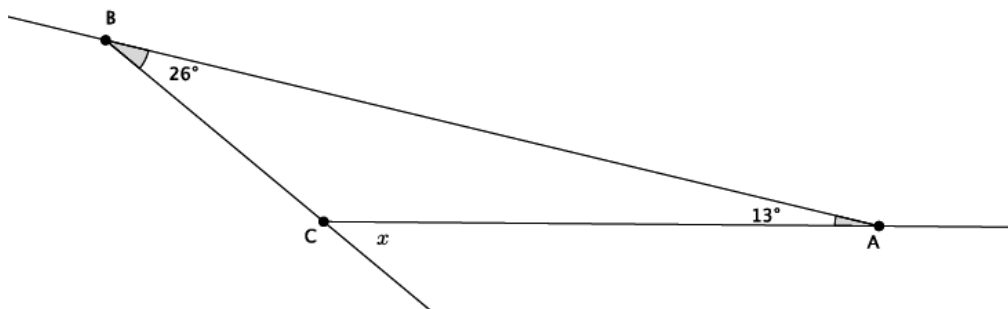


The sum of the measures of the remote interior angles of a triangle is equal to the measure of the related exterior angle. For example, $\angle CAB + \angle ABC = \angle ACE$.

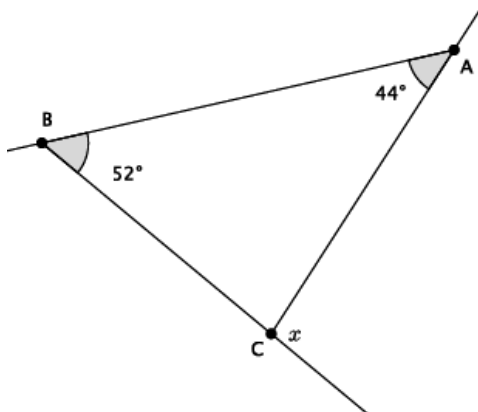
Problem Set

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

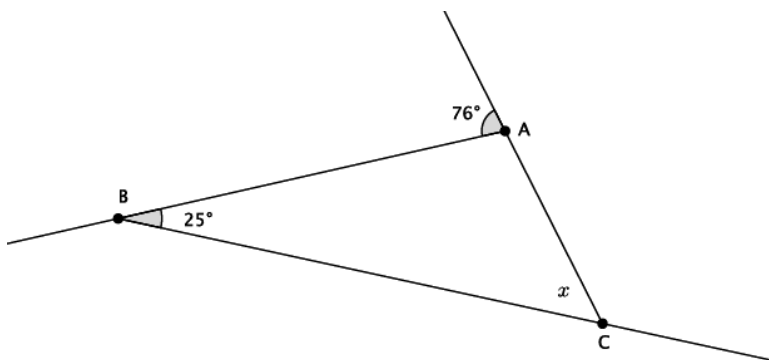
- Find the measure of angle x . Present an informal argument showing that your answer is correct.



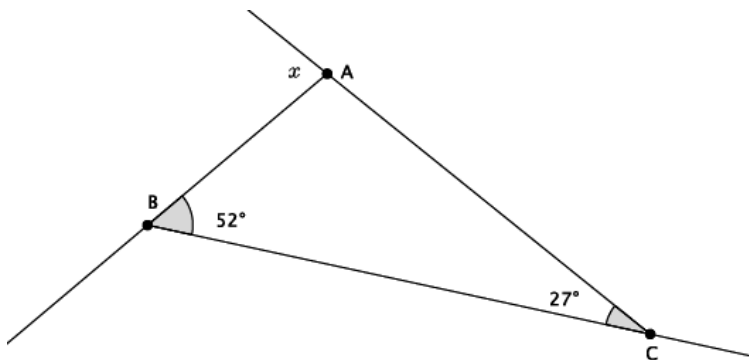
2. Find the measure of angle x .



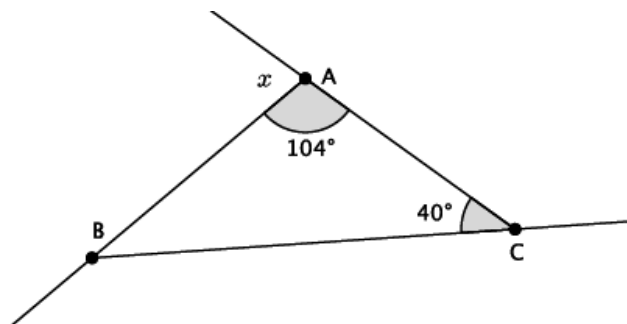
3. Find the measure of angle x . Present an informal argument showing that your answer is correct.



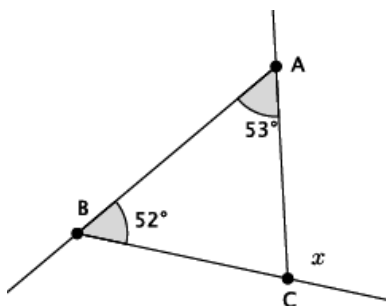
4. Find the measure of angle x .



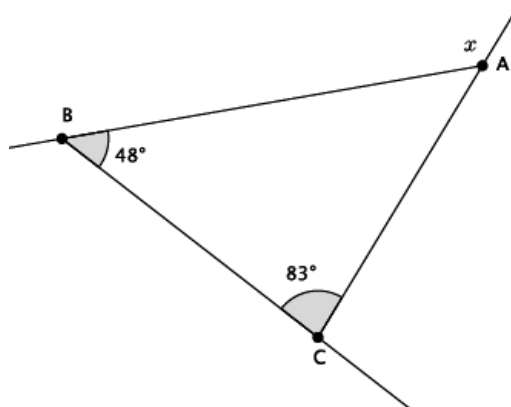
5. Find the measure of angle x .



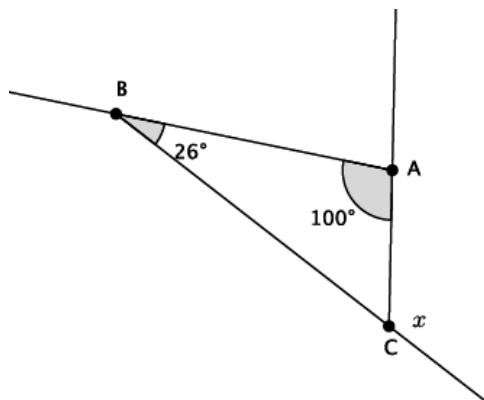
6. Find the measure of angle x .



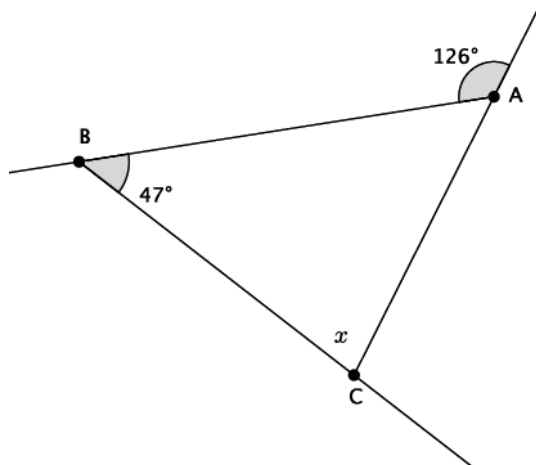
7. Find the measure of angle x .



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.

