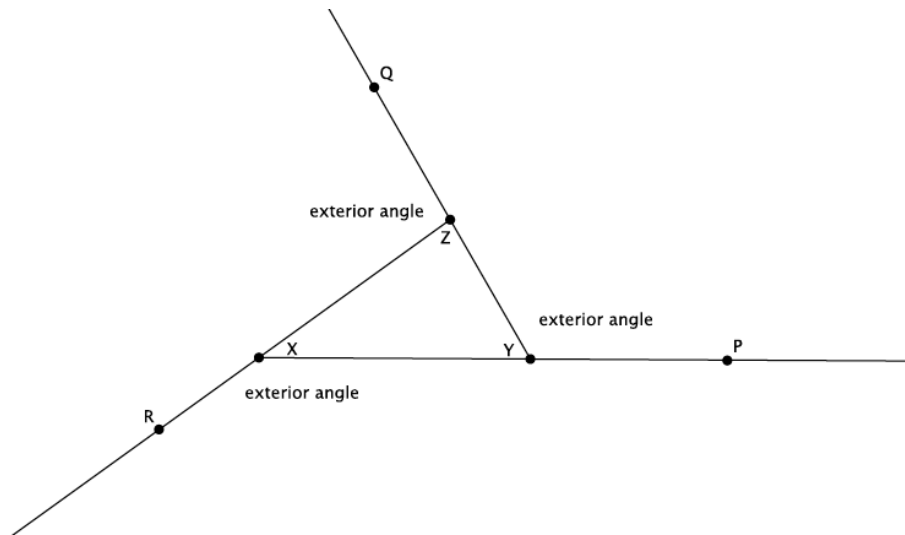


Lesson 14: More on the Angles of a Triangle

Classwork

Exercises 1–4

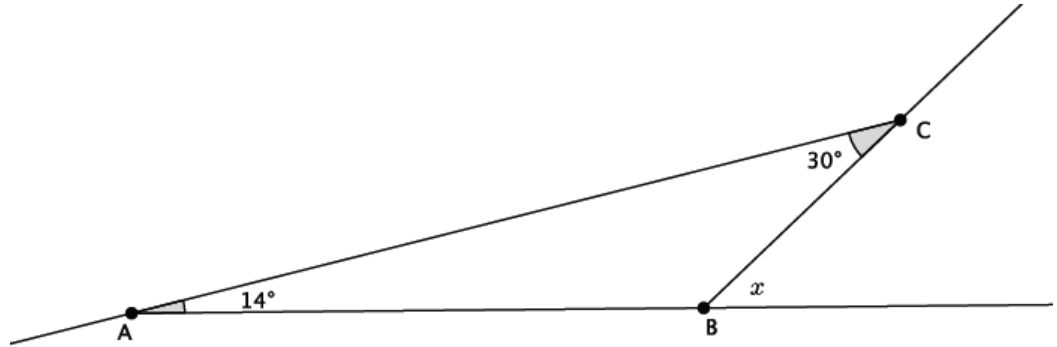
Use the diagram below to complete Exercises 1–4.



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.

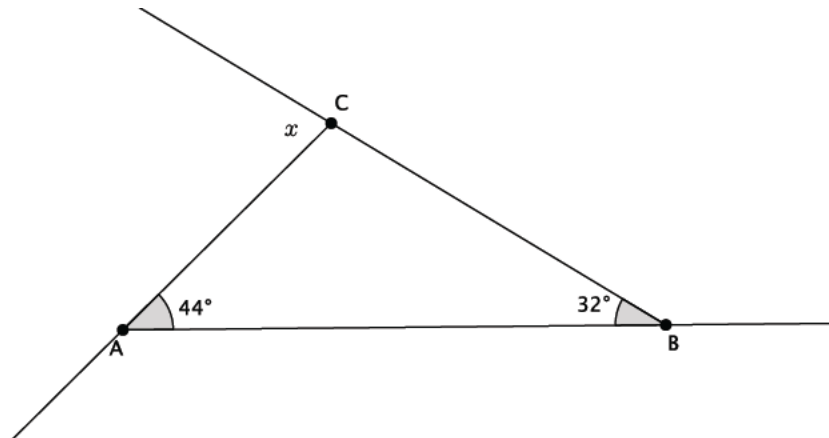
Example 1

Find the measure of angle x .



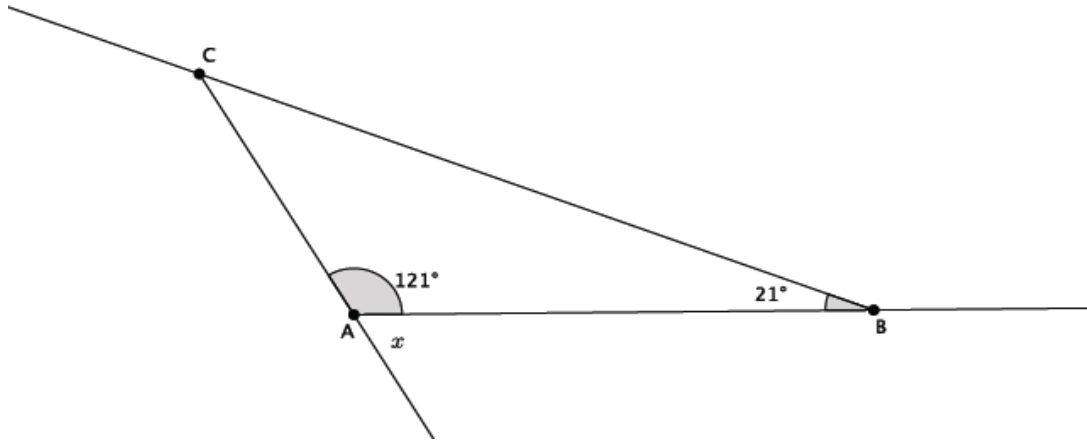
Example 2

Find the measure of angle x .



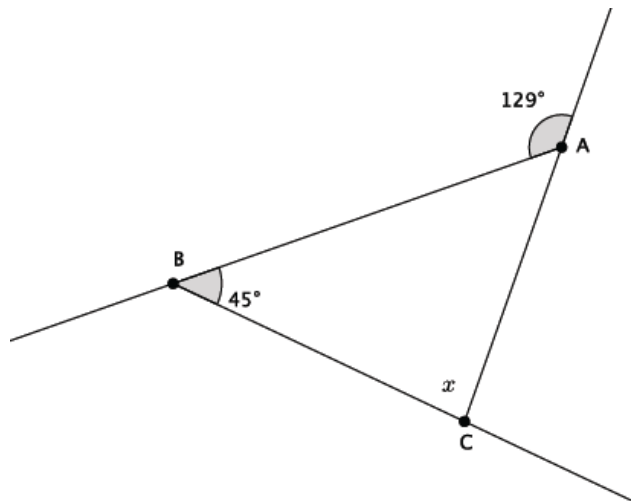
Example 3

Find the measure of angle x .



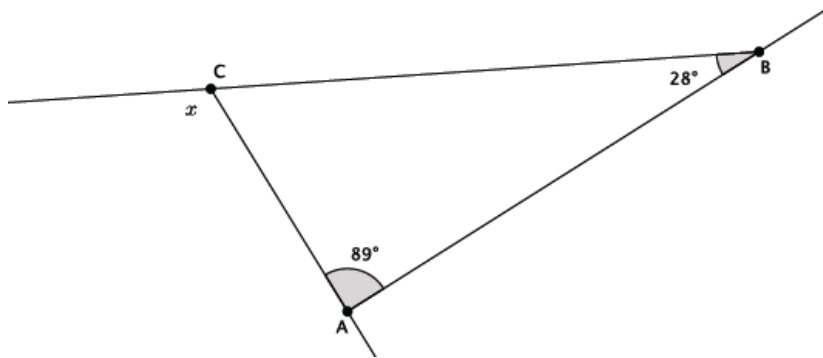
Example 4

Find the measure of angle x .

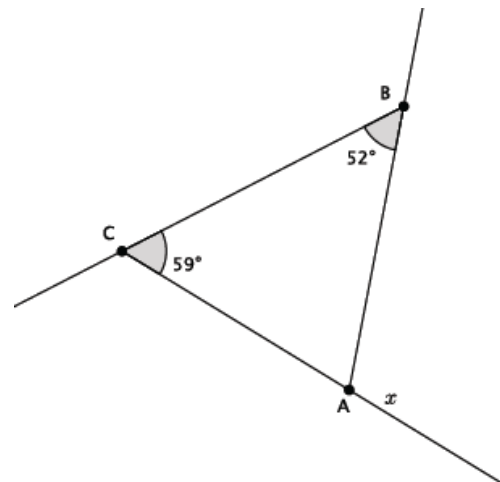


Exercises 5–10

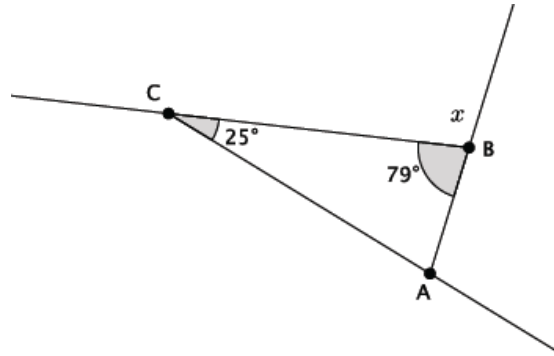
5. Find the measure of angle x . Present an informal argument showing that your answer is correct.



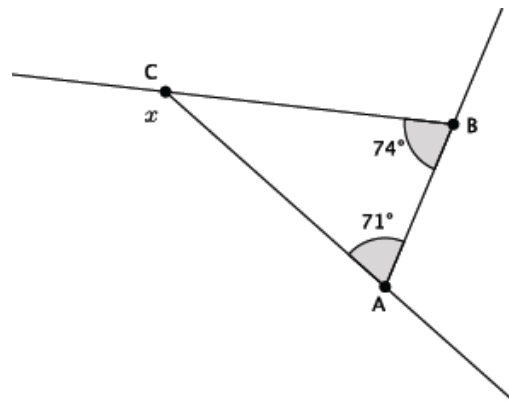
6. Find the measure of angle x . Present an informal argument showing that your answer is correct.



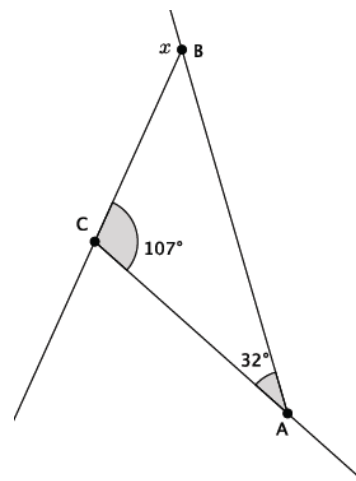
7. Find the measure of angle x . Present an informal argument showing that your answer is correct.



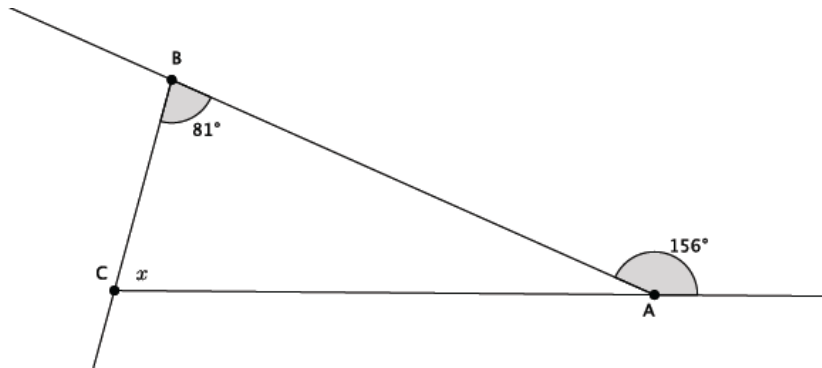
8. Find the measure of angle x . Present an informal argument showing that your answer is correct.



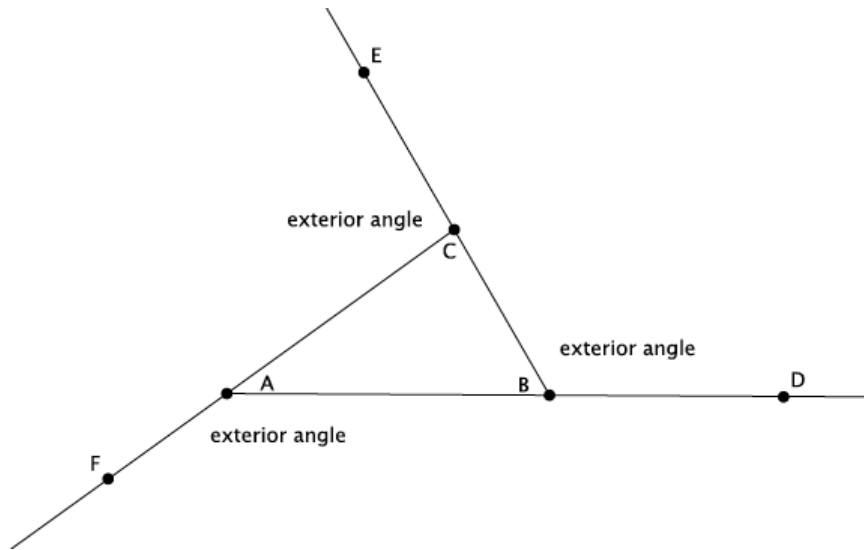
9. Find the measure of angle x . Present an informal argument showing that your answer is correct.



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



Lesson Summary

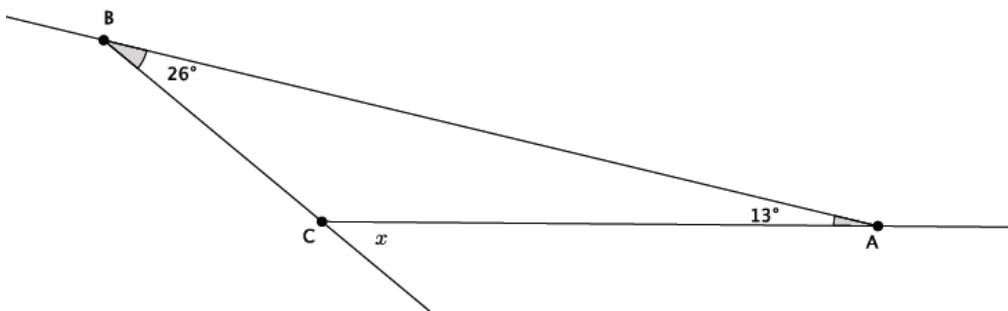


The sum of the remote interior angles of a triangle is equal to the measure of the related exterior angle. For example, $\angle CAB + \angle ABC = \angle ACE$.

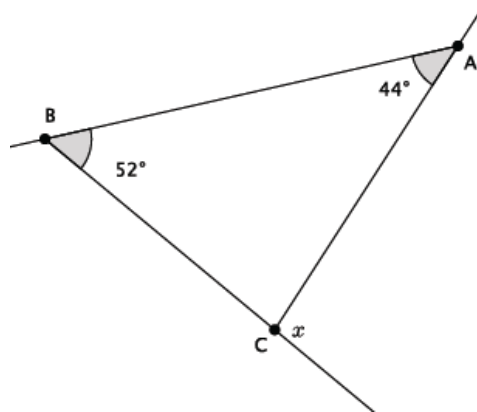
Problem Set

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

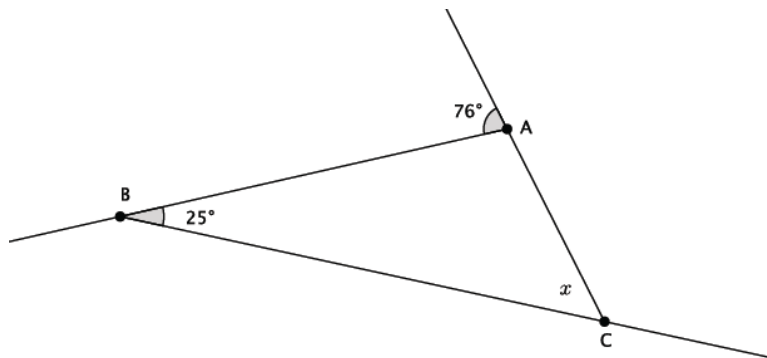
- Find the measure of angle x . Present an informal argument showing that your answer is correct.



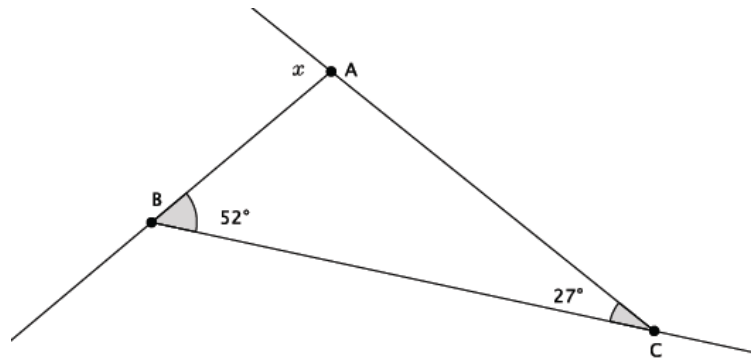
2. Find the measure of angle x .



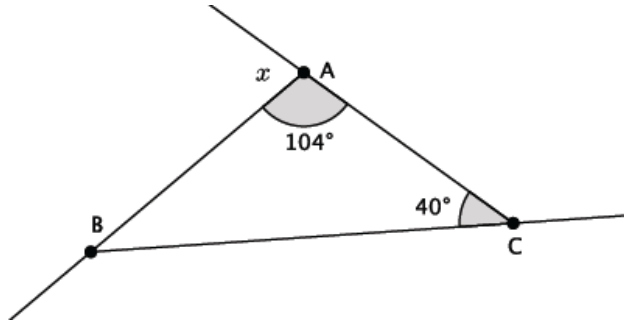
3. Find the measure of angle x . Present an informal argument showing that your answer is correct.



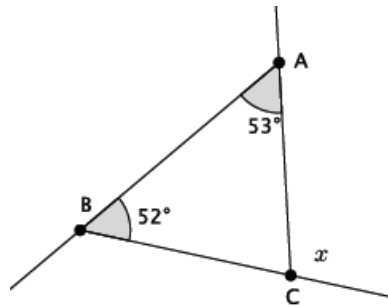
4. Find the measure of angle x .



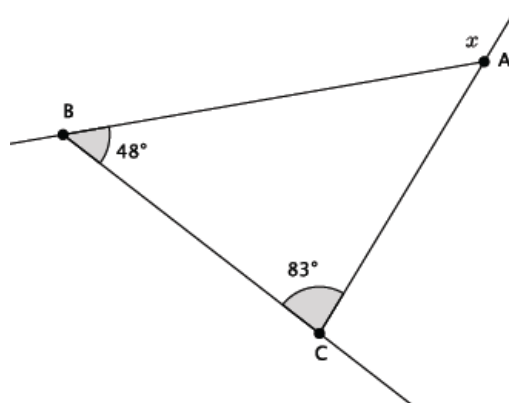
5. Find the measure of angle x .



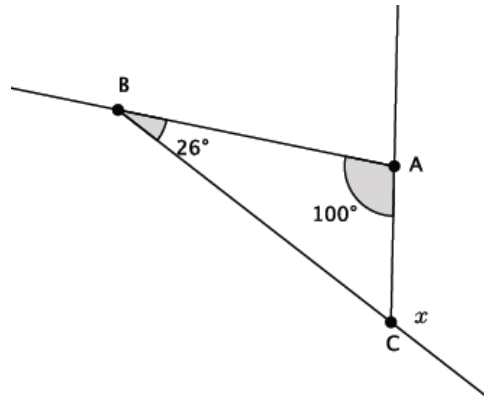
6. Find the measure of angle x .



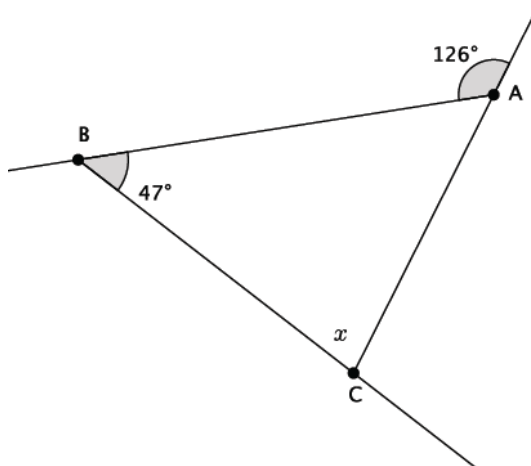
7. Find the measure of angle x .



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.

