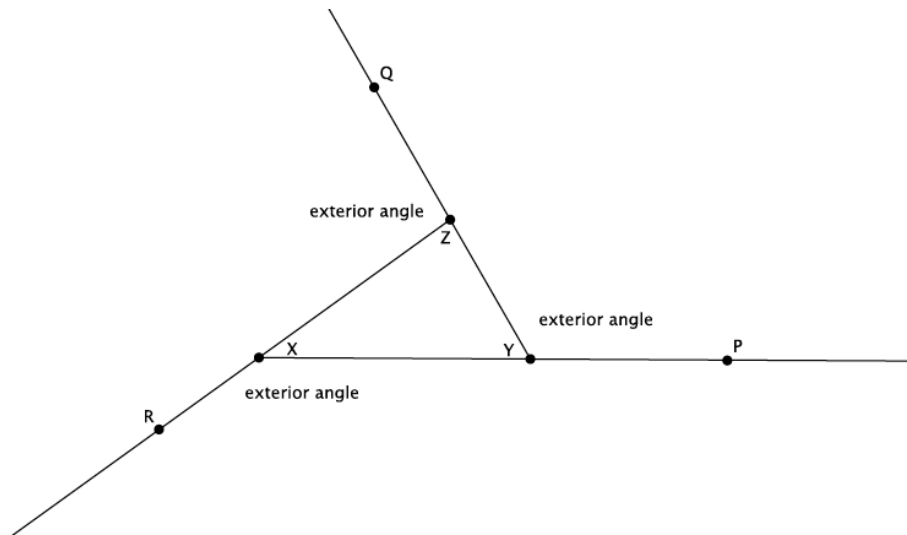


Lesson 14: More on the Angles of a Triangle

Classwork

Exercises 1–4

Use the diagram below to complete Exercises 1–4.

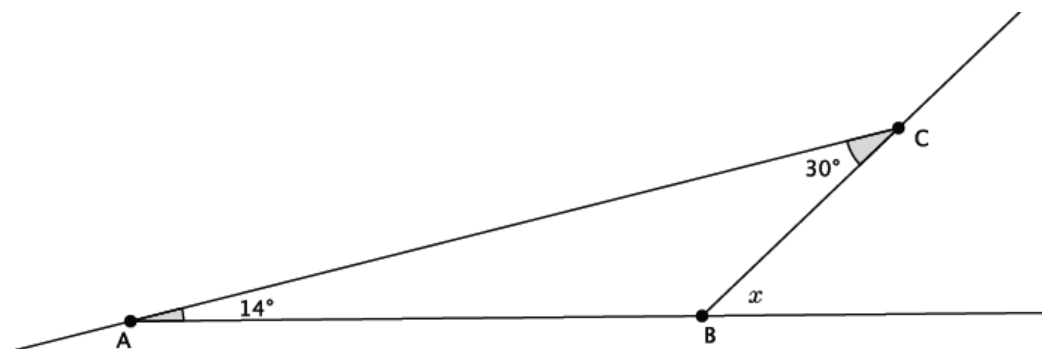


1. Name an exterior angle and the related remote interior angles.
2. Name a second exterior angle and the related remote interior angles.
3. Name a third exterior angle and the related remote interior angles.
4. Show that the measure of an exterior angle is equal to the sum of the related remote interior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

[Type here]

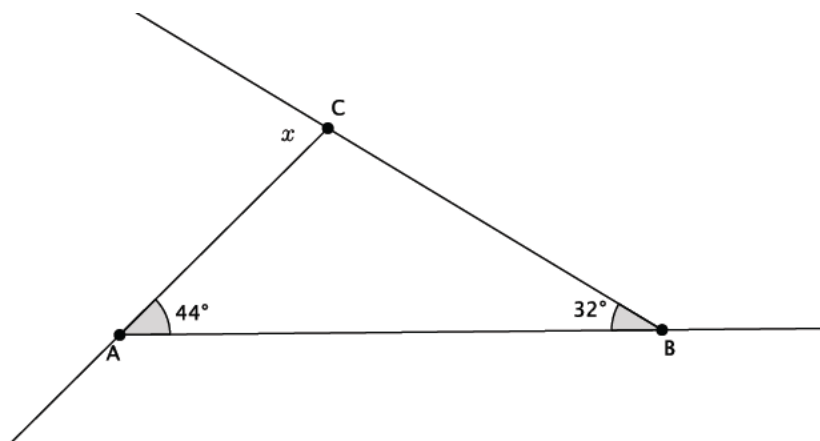
Example 1

Find the measure of angle x .



Example 2

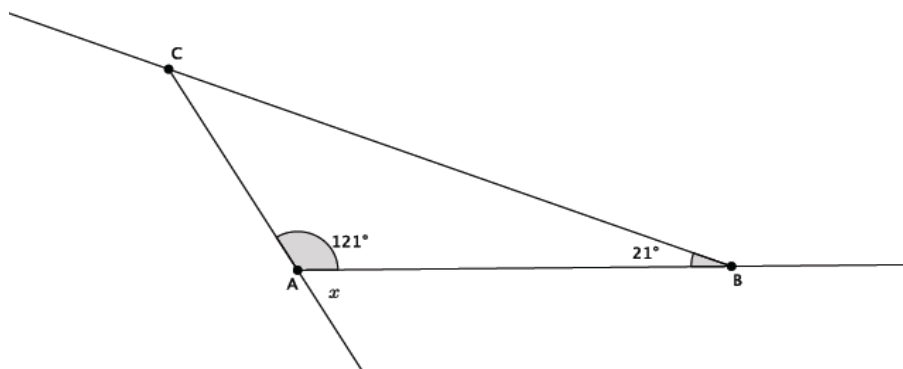
Find the measure of angle x .



[Type here]

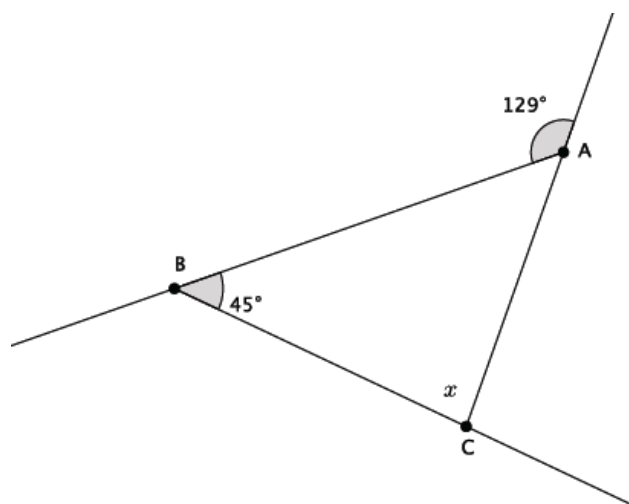
Example 3

Find the measure of angle x .



Example 4

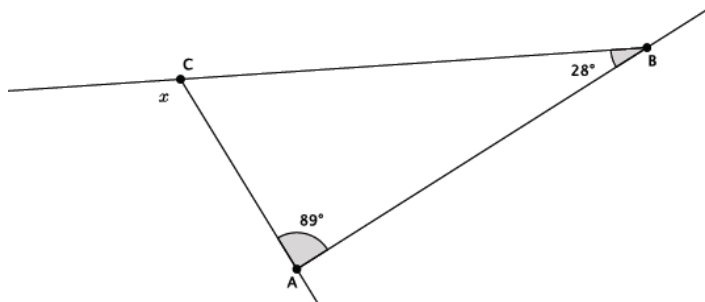
Find the measure of angle x .



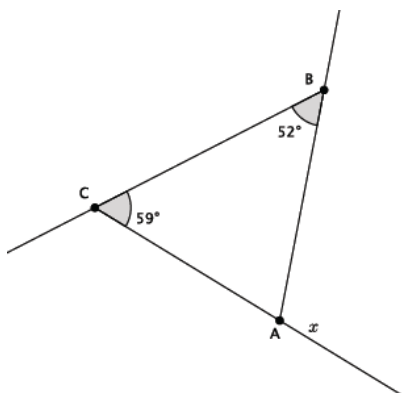
[Type here]

Exercises 5–10

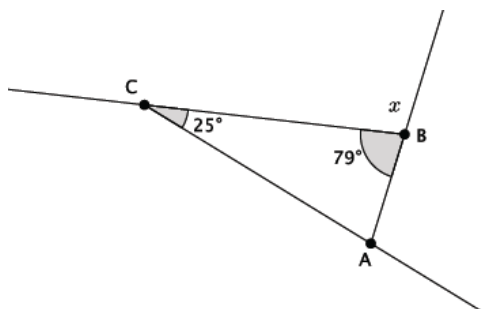
5. Find the measure of angle x . Present an informal argument showing that your answer is correct.



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

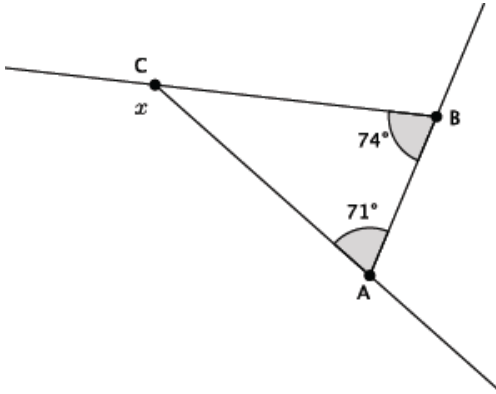


7. Find the measure of angle x . Present an informal argument showing that your answer is correct.

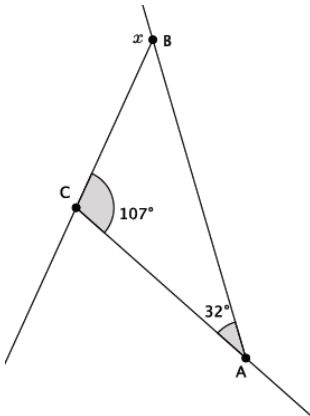


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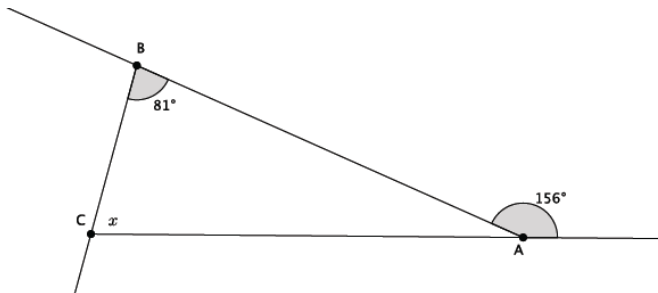
8. Find the measure of angle x . Present an informal argument showing that your answer is correct.



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

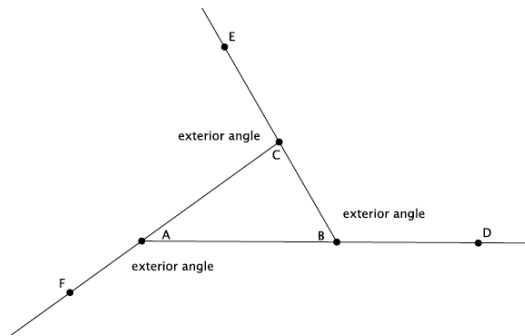


10. Find the measure of angle x . Present an informal argument showing that your answer is correct.



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Lesson Summary

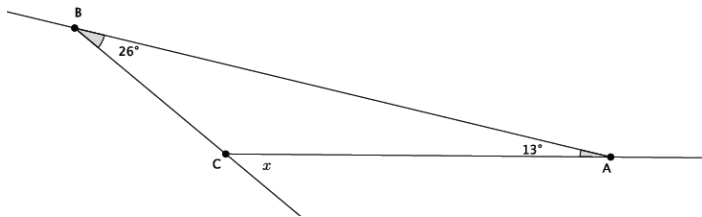


The sum of the remote interior angles of a triangle is equal to the measure of the exterior angle. For example, $\angle CAB + \angle ABC = \angle ACE$.

Problem Set

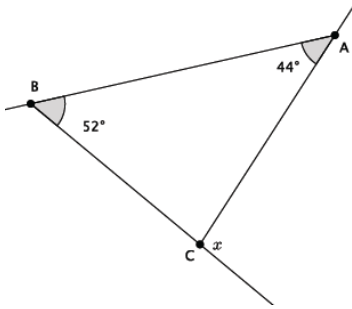
For each of the problems below, use the diagram to find the missing angle measure. Show your work.

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

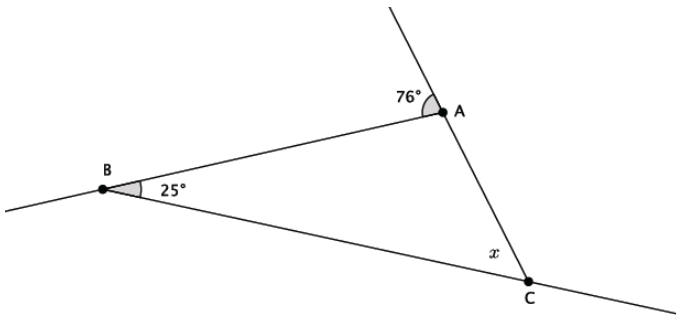


- Find the measure of angle x .

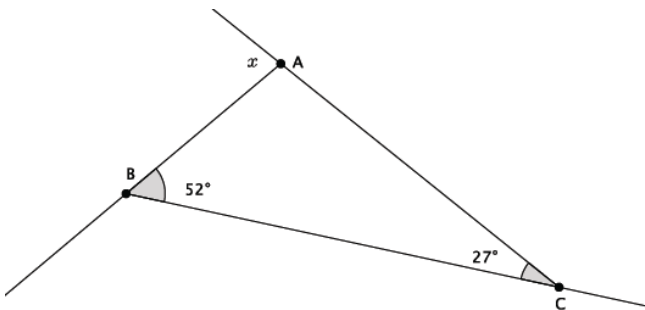
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3. Find the measure of angle x . Present an informal argument showing that your answer is correct.

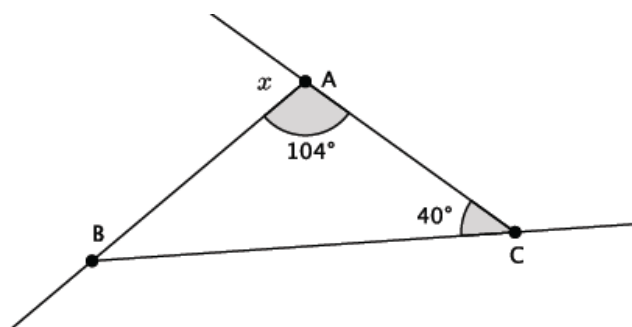


4. Find the measure of angle x .

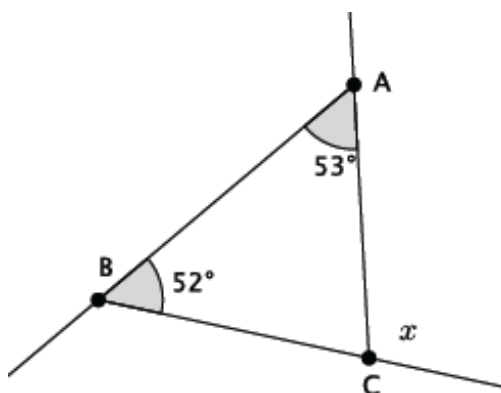


5. Find the measure of angle x .

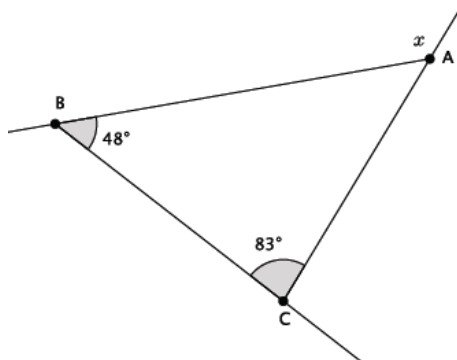
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6. Find the measure of angle x .

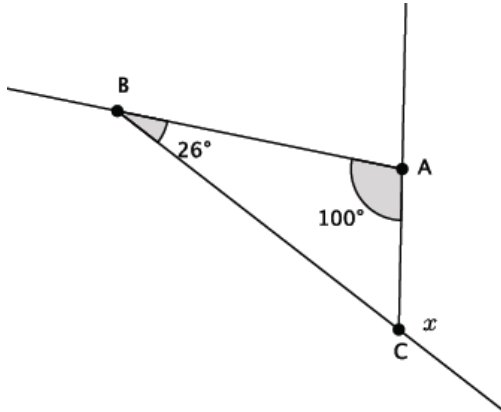


7. Find the measure of angle x .

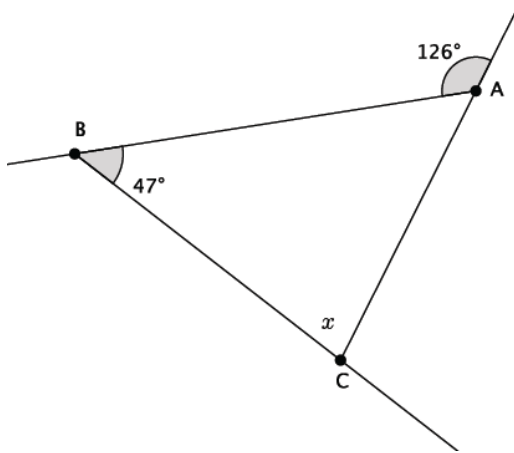


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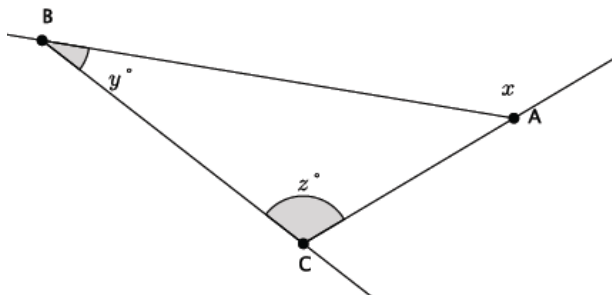
8. Find the measure of angle x .



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.



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[Type here]