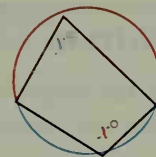
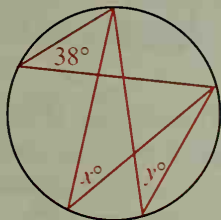


3. a. What is the sum of the measures of the red and blue arcs?
 b. Explain how part (a) allows you to deduce that $x + y = 180$.
 c. State the corollary of Theorem 9-7 that you have just proved.

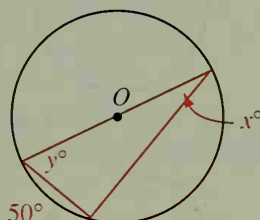


Tangents and chords are shown. Find the values of x and y . In Exercise 5, O is the center of the circle.

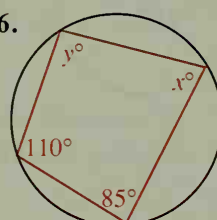
4.



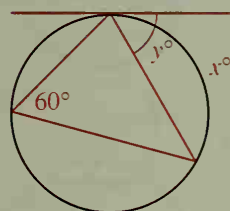
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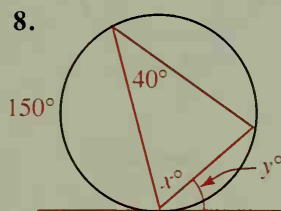
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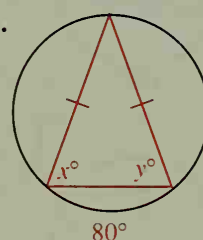
7.



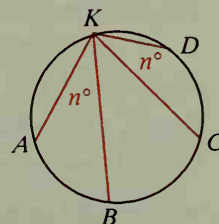
8.



9.



10. a. State the contrapositive of Corollary 3.
 b. In quadrilateral $PQRS$, $m\angle P = 100$ and $m\angle R = 90$. Is it possible to circumscribe a circle about $PQRS$? Why or why not?
11. In the diagram, $m\angle AKB = m\angle CKD = n$.
 $m\widehat{AB} = \underline{\hspace{1cm}}$ and $m\widehat{CD} = \underline{\hspace{1cm}}$. State a theorem suggested by this exercise.



12. Outline a proof of Case II of Theorem 9-7. Use the diagram on page 350. (Hint: Draw the diameter from B and apply Case I.)
13. Repeat Exercise 12 for Case III.
14. Equilateral $\triangle ABC$ is inscribed in $\odot O$. Tangents to the circle at A and C meet at D . What kind of figure is $ABCD$?