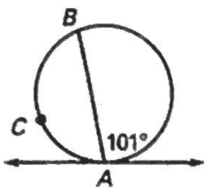
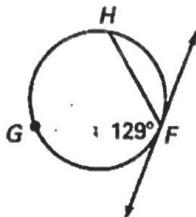


Find the indicated arc measure.

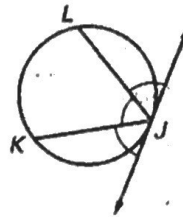
1. $m\widehat{AB}$



2. $m\widehat{FH}$

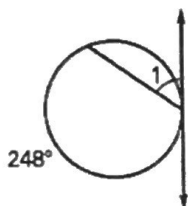


3. $m\widehat{JKL}$

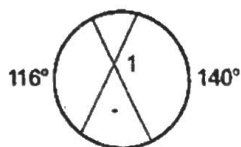


Find $m\angle 1$.

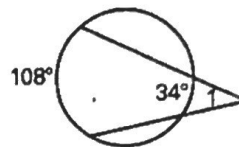
4.



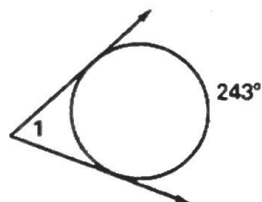
5.



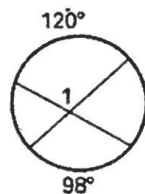
6.



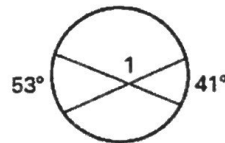
7.



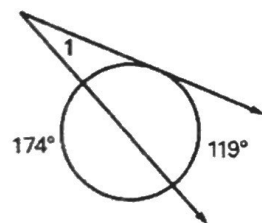
8.



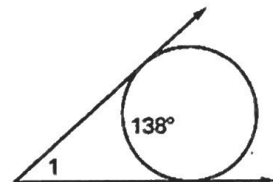
9.



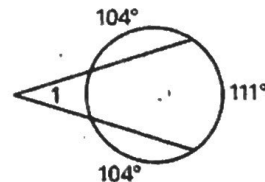
10.



11.

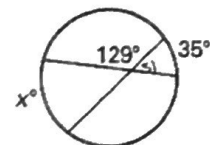


12.

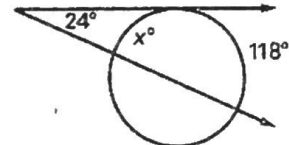


In Exercises 13-15, find the value of x .

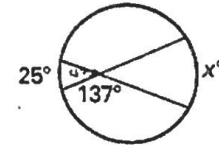
13.



14.

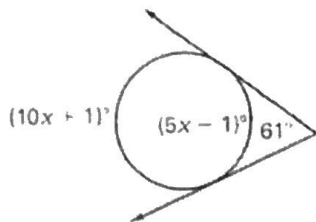


15.

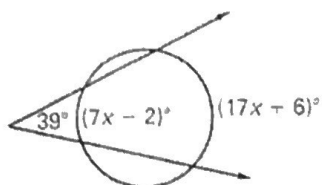


In Exercises 16–18, find the value of x .

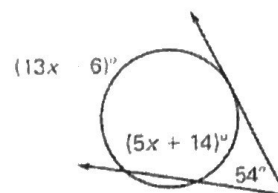
16.



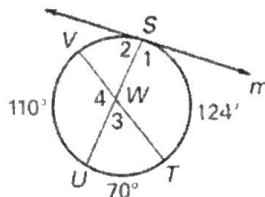
17.



18.



19. **Angle Measures** In the diagram shown, m is tangent to the circle at the point S . Find the measures of all the numbered angles.



Use the diagram shown to find the measure of the angle.

20. $m\angle CAF$

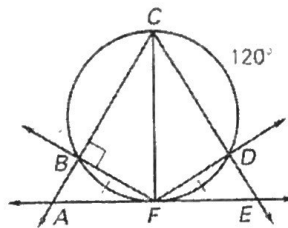
21. $m\angle AFB$

22. $m\angle CEF$

23. $m\angle CFB$

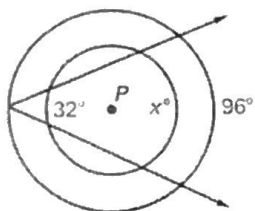
24. $m\angle DCF$

25. $m\angle BCD$

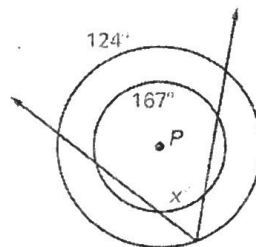


In Exercises 26 and 27, the circles have center P . Find the value of x .

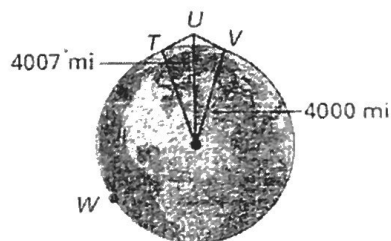
26.



27.



28. **Transportation** A plane is flying at an altitude of about 7 miles above Earth as shown in the diagram. What is the measure of arc TU that represents the part of Earth you can see? The radius of Earth is about 4000 miles.



Not drawn to scale

29. **Mountain Climbing** A mountain climber is standing on top of a mountain that is about 4.75 miles above sea level. Use the information from Exercise 28 to find the measure of the arc that represents the part of Earth the mountain climber can see.