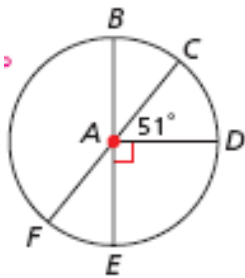


Find each arc or angle measure.



1. $m\widehat{BC}$

2. $m\angle CAE$

3. $m\angle FAE$

4. $m\widehat{CBE}$

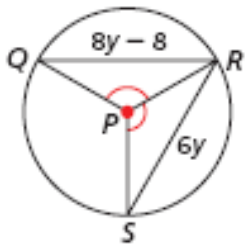
5. $m\widehat{EFD}$

6. $m\widehat{CEB}$

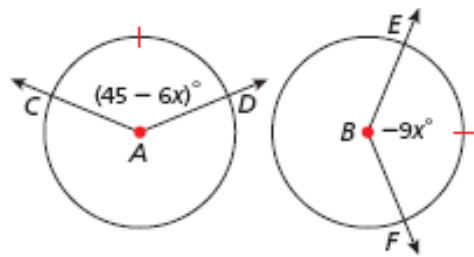
7. $m\widehat{DF}$

Solve the following problems.

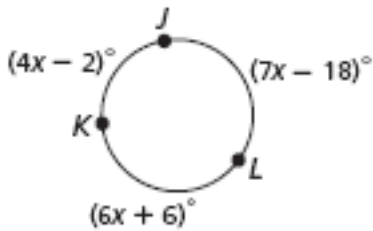
8. $\angle QPR \cong \angle RPS$. Find QR .



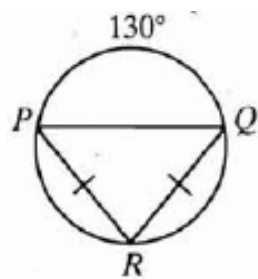
9. $\odot A \cong \odot B$, and $\widehat{CD} \cong \widehat{EF}$. Find $m\angle EBF$.



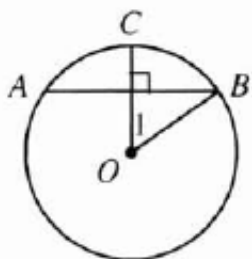
10. Find $m\widehat{JL}$.



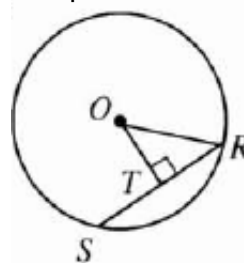
11. Find $m\widehat{PR}$.



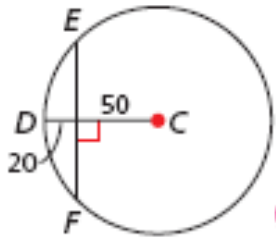
12. $m\angle ACB = 110$. Find $m\angle 1$.



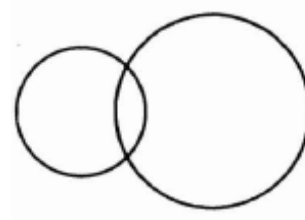
13. $OT = 9$, $SR = 18$. Find OR . Give answer in simplest form.



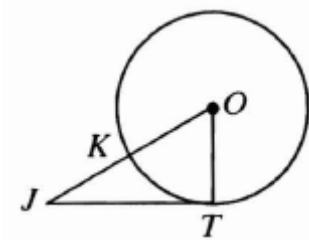
14. Find EF . Round to the nearest tenth.



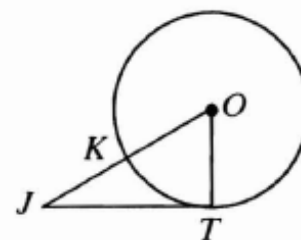
15. Draw all common tangents.



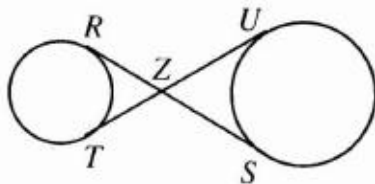
16. $m\angle TOJ = 60$ and $OT = 7$.
Find the exact length of JT in simplest form.



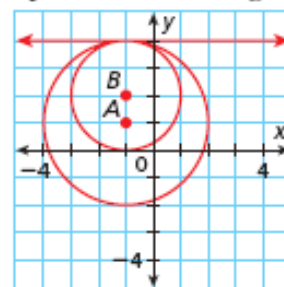
17. $OT = 6$ and $KJ = 2$.
Find the exact length of JT in simplest form.



18. \overline{RS} and \overline{TU} are common internal tangents to the circles. If $RZ = 4.7$ and $ZU = 7.3$, find RS and TU .



19. Find the equation of the tangent line.



20. Find IK .

