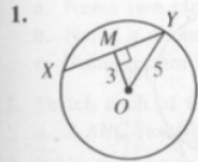


Written Exercises

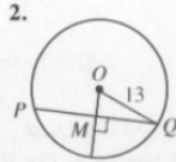
In the diagrams that follow, O is the center of the circle.

HW 12.4

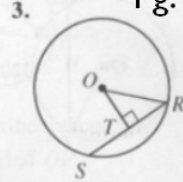
Pg. 347 (WE): # 1-14, 17-22 and Pg. 349 (S-T1): #1-3



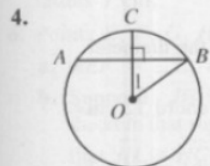
$XY = ?$



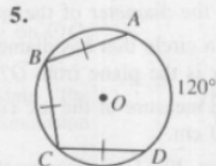
$PQ = 24; OM = ?$



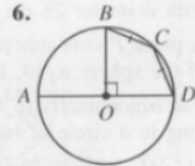
$OT = 9; RS = 18$
 $OR = ?$



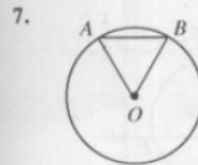
$m\widehat{ACB} = 110;$
 $m\angle 1 = ?$



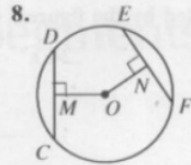
$m\widehat{BC} = ?$



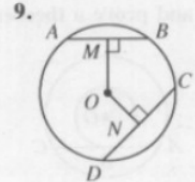
$m\widehat{CD} = ?$



$m\angle AOB = 60;$
 $AB = 24; OA = ?$



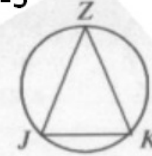
$OM = ON = 7;$
 $CM = 6; EF = ?$



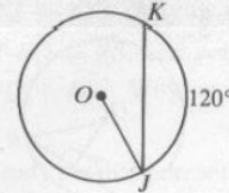
$AB = 18; OM = 12;$
 $ON = 10; CD = ?$

- Sketch a circle with two noncongruent chords. Is the longer chord farther from the center or closer to the center than the shorter chord?
- Sketch a circle O with radius 10 and chord \overline{XY} 8 cm long. How far is the chord from O ?
- Sketch a circle Q with a chord \overline{RS} that is 16 cm long and 2 cm from Q . What is the radius of $\odot Q$?
- Sketch a circle P with radius 5 cm and chord \overline{AB} that is 2 cm from P . Find the length of \overline{AB} .

14. Given: $\widehat{JZ} \cong \widehat{KZ}$
Prove: $\angle J \cong \angle K$

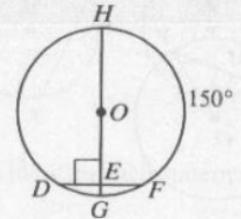


17.



If $OJ = 10$, $JK = ?$.

18.



If $OE = 8\sqrt{3}$, $HG = ?$.

- A plane 5 cm from the center of a sphere intersects the sphere in a circle with diameter 24 cm. Find the diameter of the sphere.
- A plane P cuts sphere O in a circle that has diameter 20. If the diameter of the sphere is 30, how far is the plane from O ?
- Use trigonometry to find the measure of the arc cut off by a chord 12 cm long in a circle of radius 10 cm.
- In $\odot O$, $m\widehat{RS} = 70$ and $RS = 20$. Use trigonometry to find the radius of $\odot O$.

Self-Test 1

- Points A , B , and C lie on $\odot Q$.
 - Name two radii of $\odot Q$.
 - Name a diameter of $\odot Q$.
 - Name a chord and a secant of $\odot Q$.
- Sketch each of the following.
 - $\triangle ABC$ inscribed in $\odot O$
 - Quad. $LUMX$ circumscribed about $\odot Q$
- \overline{NP} is tangent to $\odot O$ at P . If $NO = 25$ and $NP = 20$, find OP .

