

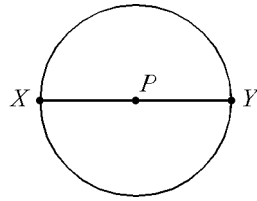
Circle Practice

Name: _____

Date: _____

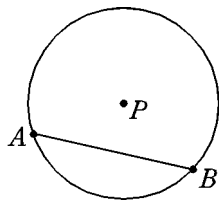
1. In circle P , \overline{XY} is a _____.

- A. radius
- B. diameter
- C. chord
- D. circumference



2. In circle P , \overline{AB} is a _____.

- A. diameter
- B. radius
- C. circumference
- D. chord

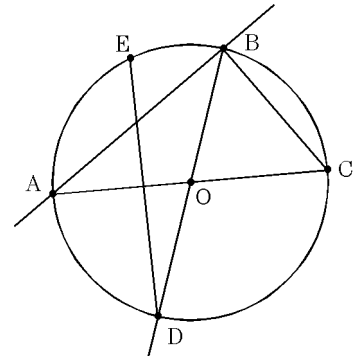


3. Which of the following circles are tangent?

- | | |
|----|----|
| A. | B. |
| C. | D. |

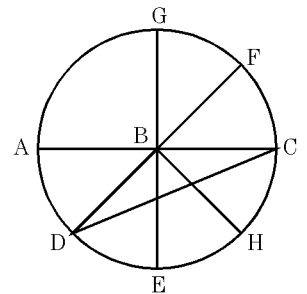
4. How many radii can be named in the diagram?

- A. 2 B. 3
- C. 4 D. 5



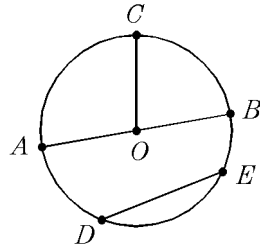
5. Which of the following is *not* a radius of the circle?

- A. \overline{AB} and \overline{BF}
- B. \overline{BC} and \overline{BE}
- C. \overline{DB} and \overline{BC}
- D. \overline{AC} and \overline{DF}



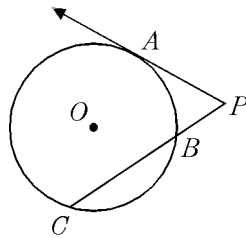
6. Which answer names a chord of circle O ?

- A. \overline{DE} B. \overline{AO}
 C. \overline{CO} D. \widehat{DE}

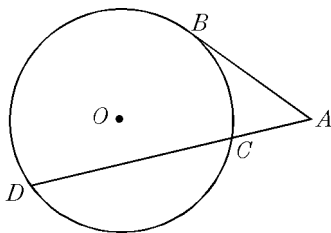


7. In the accompanying diagram, \overrightarrow{PA} is tangent to circle O at A . If $CB = 12$ and $PB = 4$, what is the length of \overline{PA} ?

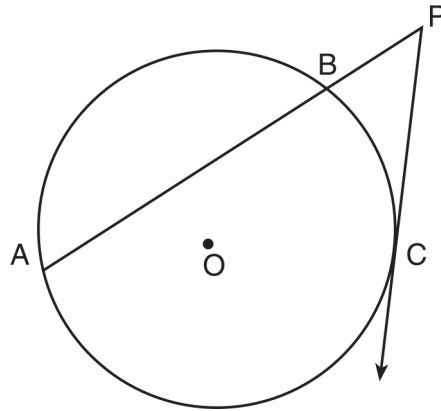
- A. $4\sqrt{3}$ B. 48
 C. $16\sqrt{3}$ D. 8



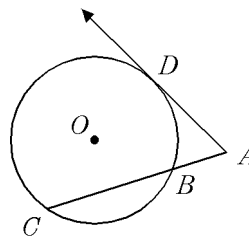
8. In the accompanying diagram, tangent \overline{AB} and secant \overline{ACD} are drawn to circle O from point A . If $AC = 4$ and $CD = 12$, find AB .



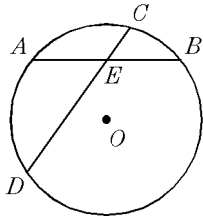
9. In the accompanying diagram, \overrightarrow{PC} is tangent to circle O , \overline{PBA} is a secant, $PC = 6$, and $PB = 3$. Find AB .



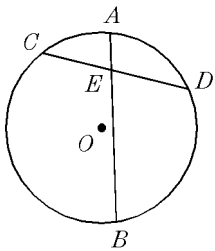
10. In the accompanying figure, \overrightarrow{AD} is tangent to circle O at D and \overline{ABC} is a secant. If $AD = 4$ and $AC = 8$, find AB .



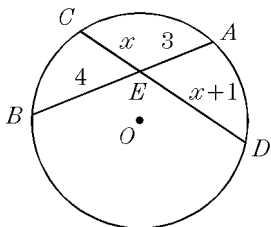
11. In the accompanying diagram of circle O , chord \overline{CD} bisects chord \overline{AB} at E , $CE = 2$, and $AB = 8$. Find ED .



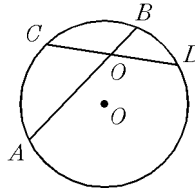
12. In the accompanying diagram of circle O , chords \overline{AB} and \overline{CD} intersect at point E . If $AE = 2$, $CD = 9$, and $CE = 4$, find BE .



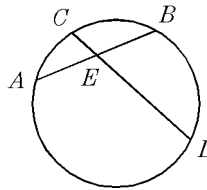
13. In the accompanying diagram of circle O , chords \overline{AB} and \overline{CD} intersect at E . If $AE = 3$, $EB = 4$, $CE = x$, and $ED = x + 1$, find CE .



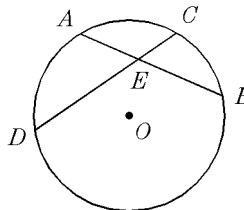
14. In the accompanying diagram, chords \overline{AB} and \overline{CD} of circle O intersect at E . If $AE = x$, $EB = x - 6$, and $CE = ED = 4$, find AE .



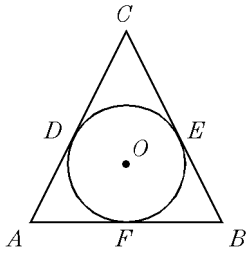
15. In the accompanying figure, chords \overline{AB} and \overline{CD} intersect at E . If $CD = 11$, $EB = 4$, and $CE = 3$, find AE .



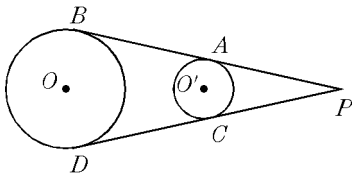
16. In the accompanying diagram of circle O , chords \overline{AB} and \overline{CD} intersect at E . If $AE = 4$, $EB = 6$, and $CE = 3$, find ED .



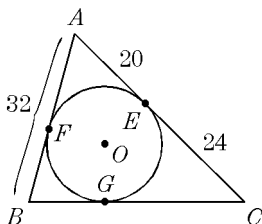
17. In the accompanying diagram, circle O is inscribed in $\triangle ABC$ so that the circle is tangent to \overline{AB} at F , to \overline{BC} at E , and to \overline{AC} at D . If $AF = FB = 5$ and $DC = 7$, find the perimeter of $\triangle ABC$.



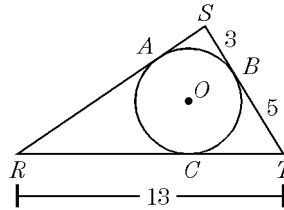
18. In the accompanying diagram, \overline{PAB} and \overline{PCD} are externally tangent to circles O and O' . If $PB = 16$ and $CD = 10$, find PA .



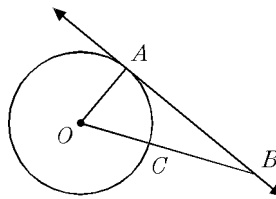
19. In the accompanying diagram, \overline{AFB} , \overline{AEC} , and \overline{BGC} are tangent to circle O at F , E , and G , respectively. If $AB = 32$, $AE = 20$, and $EC = 24$, find BC .



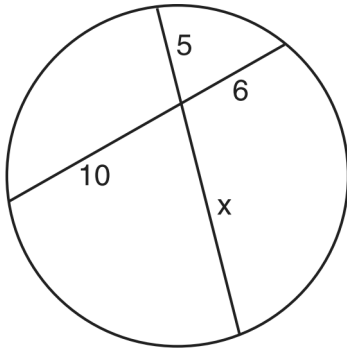
20. In the accompanying diagram, segments \overline{RS} , \overline{ST} , and \overline{TR} are tangent to circle O at A , B , and C , respectively. If $SB = 3$, $BT = 5$, and $TR = 13$, what is the measure of \overline{RS} ?



21. In the accompanying diagram, \overline{BA} is tangent to circle O at A . Radii \overline{OA} and \overline{OC} are drawn, and \overline{OC} is extended to intersect \overline{BA} at B . If $BA = 15$ and $OB = 17$, find the measure of a radius of circle O .



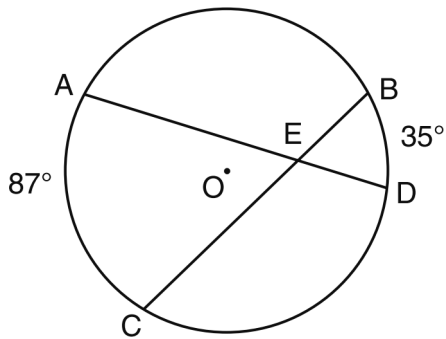
22. The accompanying diagram shows two intersecting paths within a circular garden.



What is the length of the portion of the path marked x ?

- A. $8\frac{1}{3}$ B. 11 C. 3 D. 12

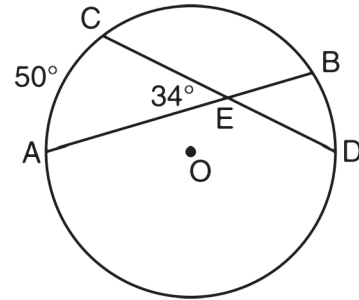
23. In the diagram below of circle O , chords \overline{AD} and \overline{BC} intersect at E , $m\widehat{AC} = 87$, and $m\widehat{BD} = 35$.



What is the degree measure of $\angle CEA$?

- A. 87 B. 61 C. 43.5 D. 26

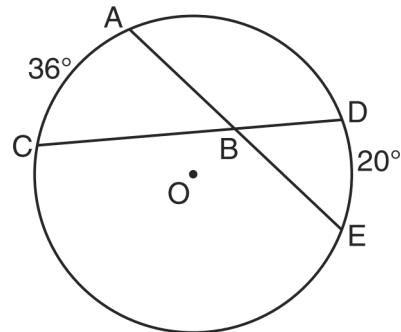
24. In the diagram below of circle O , chords \overline{AB} and \overline{CD} intersect at E .



If $m\angle AEC = 34$ and $m\widehat{AC} = 50$, what is $m\widehat{DB}$?

- A. 16 B. 18 C. 68 D. 118

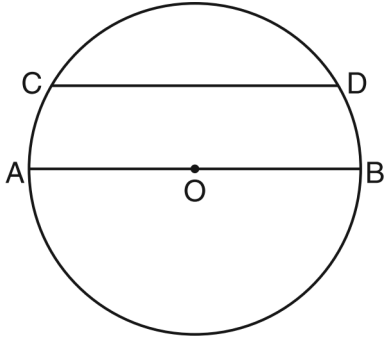
25. In the diagram below of circle O , chords \overline{AE} and \overline{DC} intersect at point B , such that $m\widehat{AC} = 36$ and $m\widehat{DE} = 20$.



What is $m\angle ABC$?

- A. 56 B. 36 C. 28 D. 8

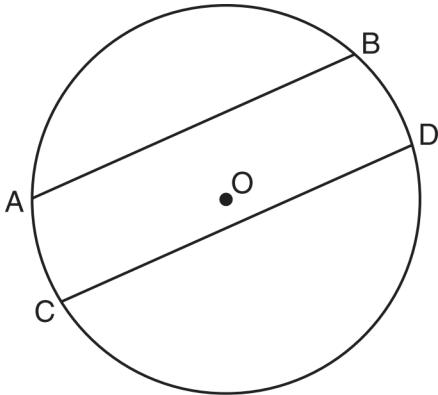
26. In the diagram of circle O below, chord \overline{CD} is parallel to diameter \overline{AOB} and $m\widehat{AC} = 30$.



What is $m\widehat{CD}$?

- A. 150 B. 120 C. 100 D. 60

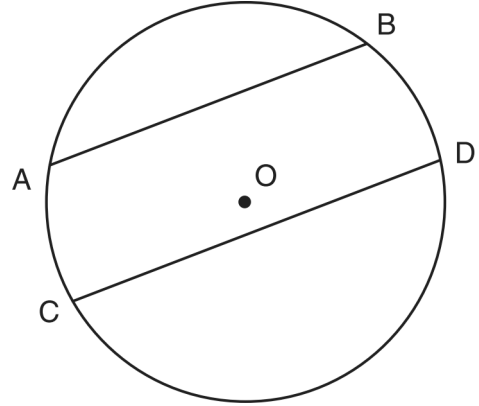
27. In the diagram below of circle O , chord \overline{AB} is parallel to chord \overline{CD} .



Which statement must be true?

- A. $\widehat{AC} \cong \widehat{BD}$ B. $\widehat{AB} \cong \widehat{CD}$
 C. $\overline{AB} \cong \overline{CD}$ D. $\widehat{ABD} \cong \widehat{CDB}$

28. In circle O shown in the diagram below, chords \overline{AB} and \overline{CD} are parallel.

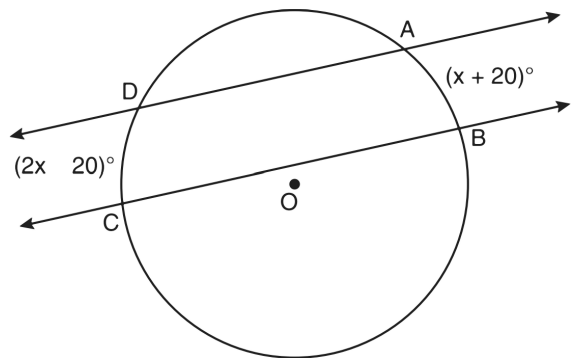


If $m\widehat{AB} = 104$ and $m\widehat{CD} = 168$, what is $m\widehat{BD}$?

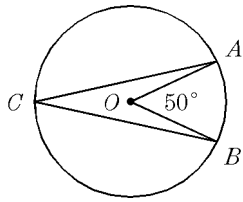
- A. 38 B. 44 C. 88 D. 96

29. In the diagram below, two parallel lines intersect circle O at points A , B , C , and D , with $m\widehat{AB} = x + 20$ and $m\widehat{DC} = 2x - 20$.

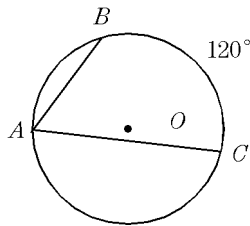
Find $m\widehat{AB}$.



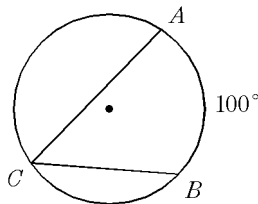
30. In the accompanying figure, the measure of angle AOB is 50° . Find the measure of inscribed angle ACB .



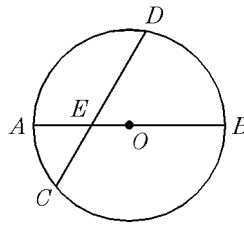
31. In the accompanying diagram, $m\widehat{BC} = 120$. Find the measure of inscribed angle BAC .



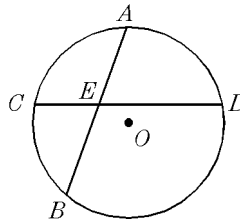
32. In the accompanying figure, the measure of minor arc AB is 100 . Find the measure of inscribed angle ACB .



33. In the accompanying diagram, \overline{AB} is a diameter of circle O and chord \overline{CD} intersects diameter \overline{AB} at E . If $m\widehat{AD} = 100$ and $m\widehat{AC} = 40$, find $m\angle DEB$.

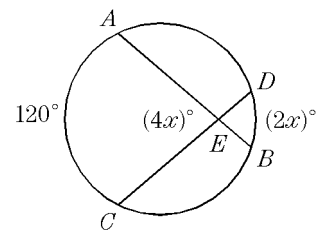


34. In the accompanying diagram, chords \overline{AB} and \overline{CD} intersect in the circle at E . If $m\widehat{BC} = 60$ and $m\widehat{AD} = 80$, find $m\angle AEC$.

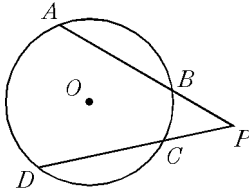


35. In the diagram below, chords \overline{AB} and \overline{CD} intersect at E . If $m\angle AEC = 4x$, $m\widehat{AC} = 120$, and $m\widehat{DB} = 2x$, what is the value of x ?

- A. 12 B. 20
C. 30 D. 60

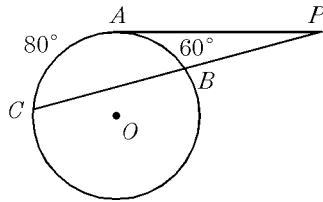


36. In the accompanying diagram, \overline{PBA} and \overline{PCD} are secants to the circle. If $m\angle P = 40$ and $m\widehat{AD} = 120$, find $m\widehat{BC}$.

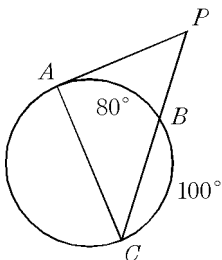


37. In the accompanying diagram, tangent \overline{PA} and secant \overline{PBC} are drawn to circle O from point P . If $m\widehat{AC} = 80$ and $m\widehat{AB} = 60$, what is the measure of $\angle P$?

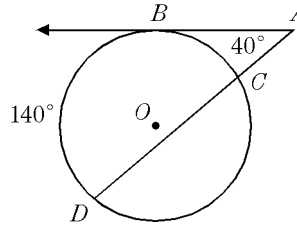
- A. 10 B. 20
C. 60 D. 70



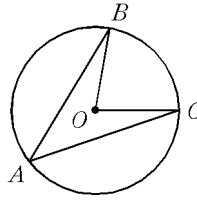
38. In the diagram below, \overline{PA} is tangent to the circle at A and \overline{PBC} is a secant. If $m\widehat{AB} = 80$ and $m\widehat{BC} = 100$, what is $m\angle APB$?



39. In the accompanying diagram, \overline{AB} is tangent to circle O at B and \overline{ACD} is a secant. If $m\angle A = 40$ and $m\widehat{BD} = 140$, find $m\widehat{BC}$.



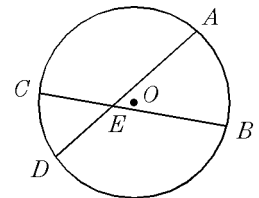
40. In the accompanying diagram of circle O , the measure of inscribed angle BAC is 40° . Find, in degrees, the measure of central angle BOC .



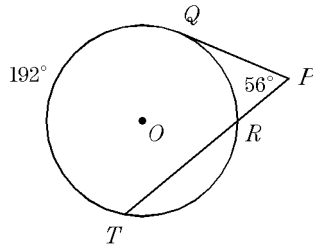
41. In the accompanying diagram of circle O , $m\widehat{AB} = 64$ and $m\angle AEB = 52$.

What is the measure of \widehat{CD} ?

- A. 104° B. 80°
C. 52° D. 40°



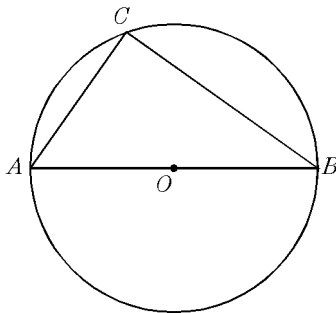
42. In the accompanying diagram, \overline{PQ} is tangent to circle O at Q and \overline{PRT} is a secant. If $\angle P = 56$ and $m\widehat{QT} = 192$, find $m\widehat{QR}$.



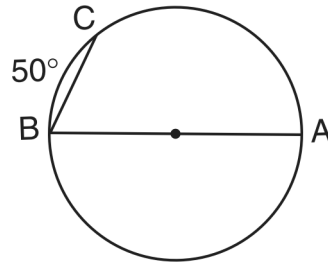
43. In the accompanying diagram, $\triangle ABC$ is inscribed in circle O and \overline{AB} is a diameter.

What is the number of degrees in $m\angle C$?

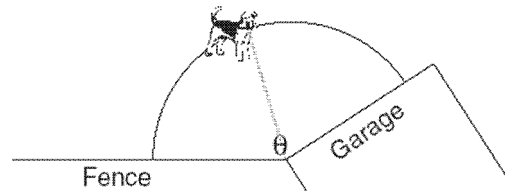
- A. 30
- B. 45
- C. 60
- D. 90



44. In the accompanying diagram, \overline{BA} is a diameter and $m\widehat{BC} = 50$. Find $m\angle CBA$.



45. A dog has a 20-foot leash attached to the corner where a garage and a fence meet, as shown in the accompanying diagram. When the dog pulls the leash tight and walks from the fence to the garage, the arc the leash makes is 55.8 feet.

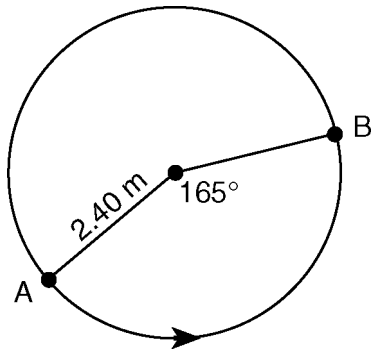


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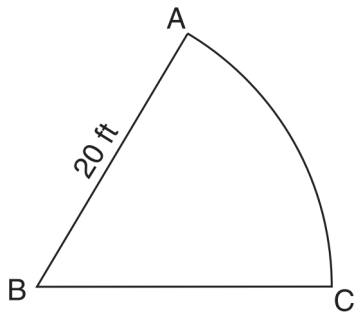
What is the measure of angle θ between the garage and the fence, in radians?

- A. 0.36
- B. 2.79
- C. 3.14
- D. 160

46. The accompanying diagram shows the path of a cart traveling on a circular track of radius 2.40 meters. The cart starts at point A and stops at point B , moving in a counterclockwise direction. What is the length of minor arc AB , over which the cart traveled, to the nearest tenth of a meter?



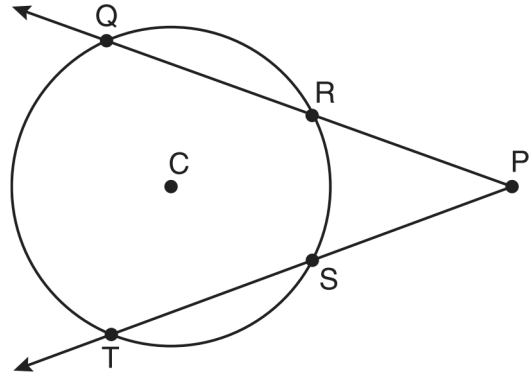
47. A sprinkler system is set up to water the sector shown in the accompanying diagram, with angle ABC measuring 1 radian and radius $AB = 20$ feet.



What is the length of arc AC , in feet?

- A. 63 B. 31 C. 20 D. 10

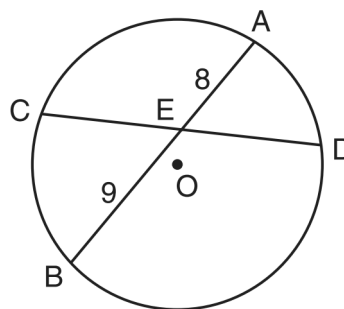
48. In the diagram below of circle C , $m\widehat{QT} = 140$ and $m\angle P = 40$.



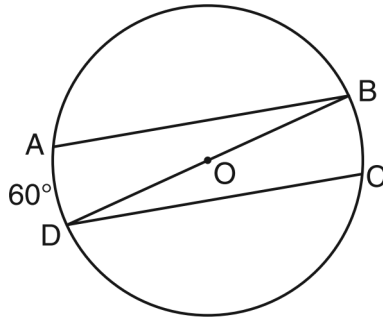
What is $m\widehat{RS}$?

- A. 50 B. 60 C. 90 D. 100

49. In the diagram below of circle O , chord \overline{AB} bisects chord \overline{CD} at E . If $AE = 8$ and $BE = 9$, find the length of \overline{CE} in simplest radical form.



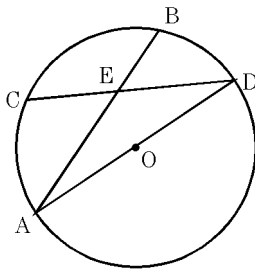
50. In the diagram of circle O below, chords \overline{AB} and \overline{CD} are parallel, and \overline{BD} is a diameter of the circle.



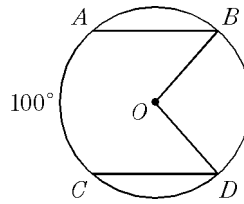
If $m\widehat{AD} = 60$, what is $m\angle CDB$?

- A. 20 B. 30 C. 60 D. 120

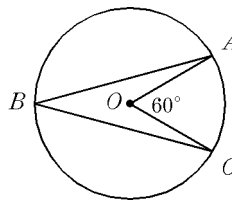
51. In the accompanying diagram of circle O , chords \overline{AB} and \overline{CD} intersect at E and \overline{AD} is a diameter. If $m\widehat{CB} = 82$, find $m\angle AED$.



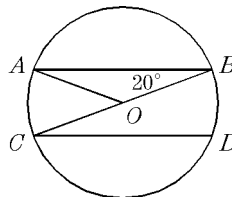
52. In the accompanying diagram of circle O , chord \overline{AB} is parallel to chord \overline{CD} . If $m\widehat{AC} = 100$, find $m\angle BOD$.



53. In the accompanying figure, central angle AOC measures 60° . What is the number of degrees in the measure of inscribed angle ABC ?

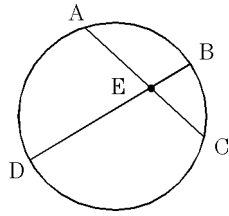


54. In the accompanying diagram of circle O , $\overline{AB} \parallel \overline{CD}$, \overline{BC} is a diameter, and radius \overline{AO} is drawn. If $m\angle ABC = 20$, find $m\widehat{BD}$.



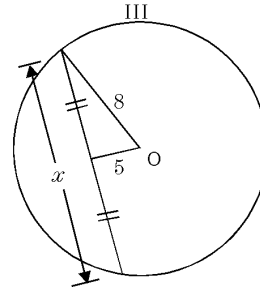
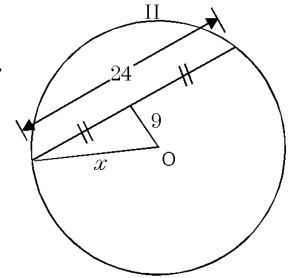
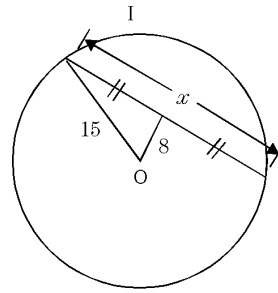
55. In the circle shown, chords AC and BD intersect at E . If $EB = x - 4$, $DE = 2x + 9$, $AE = x$, and $EC = x + 6$. How long is \overline{AC} ?

- A. 18 B. 21
C. 22 D. 24



56. O is the center of each circle.

Find x in each of I, II, III respectively.



- A. $2\sqrt{161}$, $\sqrt{657}$, $2\sqrt{39}$
B. 34, 15, $2\sqrt{39}$
C. $2\sqrt{161}$, 15, $2\sqrt{39}$
D. 34, 15, $2\sqrt{89}$

Circle Practice 11/04/2015

1.
Answer: B
Objective: G.C.2
2.
Answer: D
Objective: G.C.2
3.
Answer: A
Objective: G.C.2
4.
Answer: C
Objective: G.C.2
5.
Answer: D
Objective: G.C.2
6.
Answer: A
Objective: G.C.2
7.
Answer: D
8.
Answer: 8
9.
Answer: 9
10.
Answer: 2
11.
Answer: 8
12.
Answer: 10
13.
Answer: 3
14.
Answer: 8
15.
Answer: 6
16.
Answer: 8
17.
Answer: 34

18.
Answer: 6
19.
Answer: 36
20.
Answer: 11
21.
Answer: 8
22.
Answer: D
23.
Answer: B
24.
Answer: B
25.
Answer: C
26.
Answer: B
27.
Answer: A
28.
Answer: B
29.
Answer: 60
30.
Answer: 25
31.
Answer: 60
32.
Answer: 50
33.
Answer: 60
34.
Answer: 110
35.
Answer: B
36.
Answer: 40
37.
Answer: A

38.
Answer: 50
39.
Answer: 60
40.
Answer: 80
41.
Answer: D
42.
Answer: 80
43.
Answer: D
44.
Answer: 65
45.
Answer: B
46.
Answer: 6.9
47.
Answer: C
48.
Answer: B
49.
Answer: $6\sqrt{2}$
50.
Answer: B
51.
Answer: 131
52.
Answer: 100
53.
Answer: 30
54.
Answer: 40
55.
Answer: D
Objective: G.C.2
56.
Answer: C
Objective: G.C.2