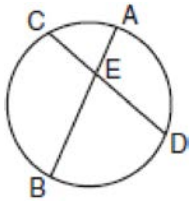
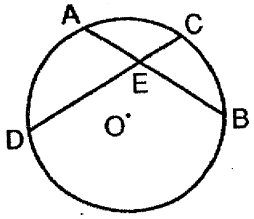
G.C.A.2: Chords, Secants and Tangents 2

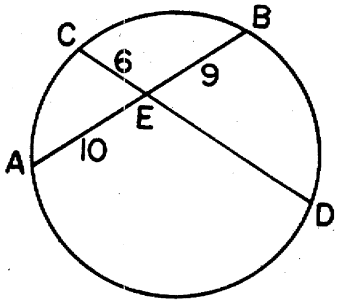
1 In the accompanying diagram of a circle, chords $\overline{AB}$ and $\overline{CD}$ intersect at E, $CE = 5$, $CD = 13$, and $AE = 4$. Find the length of $\overline{BE}$.



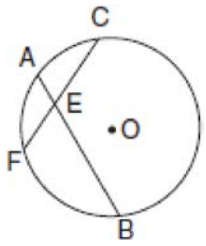
2 In the accompanying diagram of circle O, chords $\overline{AB}$ and $\overline{CD}$ intersect at E. If $AE = 4$, $EB = 6$, and $CE = 3$, find ED.



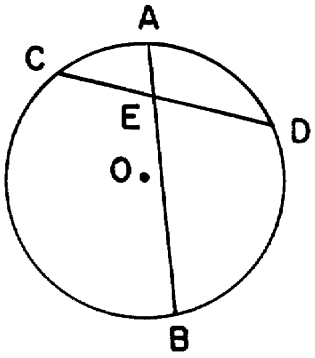
3 In the accompanying diagram, $\overline{AB}$ and $\overline{CD}$ are chords of the circle and intersect at E. If $AE = 10$, $EB = 9$, and $CE = 6$, find DE.



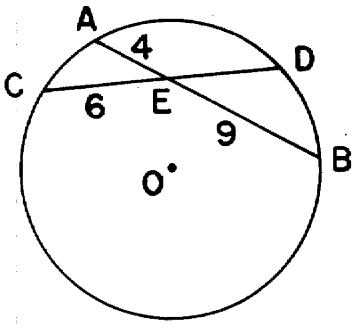
4 In the accompanying diagram of circle O, chords $\overline{AB}$ and $\overline{CF}$ intersect at E. If $EB = 16$, $AE = 5$, and $CE = 10$, find EF.



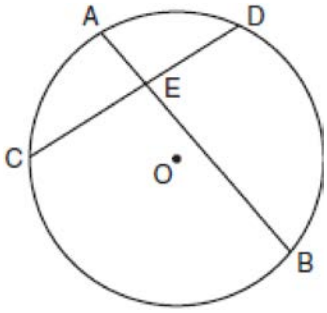
5 In the accompanying diagram of circle O, chords $\overline{AB}$ and $\overline{CD}$ intersect at E. If $AE = 2$, $CD = 9$, and $CE = 4$, find BE.



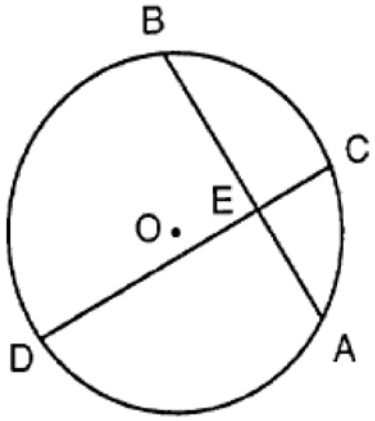
6 In the accompanying diagram of circle O, chords $\overline{AB}$ and $\overline{CD}$ intersect at E. If $AE = 4$, $EB = 9$, and $CE = 6$, what is the length of $\overline{ED}$?



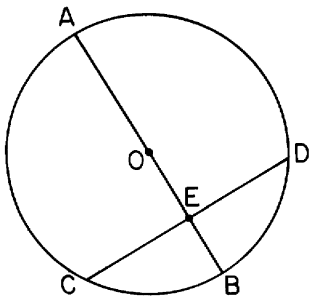
7 In the accompanying diagram of circle O, chords $\overline{AB}$ and $\overline{CD}$ intersect at E, $AE = 5$, $CD = 18$, and $ED = 8$. Find the length of $\overline{EB}$.



8 In the accompanying diagram of circle O, chords $\overline{AB}$ and $\overline{CD}$ intersect at E, $AE = x$, $EB = x + 1$, $CE = x - 1$, and $ED = 2x$. Find AE.

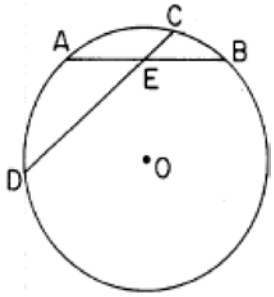


9 In circle O, diameter $\overline{AB}$ is perpendicular to chord $\overline{CD}$ at E. If $AE = 16$ and $EB = 4$, what is CD?



1) 32
2) 16
3) 10
4) 8

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



11 In circle O, chords $\overline{AB}$ and $\overline{CD}$ intersect at E. If $AE = 4$, $EB = 12$, and $ED = 16$, then CE equals
1) 19
2) 16
3) 3
4) 48

12 Chords $\overline{AB}$ and $\overline{CD}$ of circle O intersect at E. If $AE = 4$, $EB = 5$, and $CE = 2$, find ED.

13 In circle O, chords $\overline{AB}$ and $\overline{CD}$ intersect at E. If $AE = 8$, $EB = 6$, and $ED = 12$, find the length of $\overline{CE}$.

14 In a circle, chords $\overline{AB}$ and $\overline{CD}$ intersect at point E. If $AE = x + 1$, $EB = x$, $CE = 2$, and $ED = 3$, find the value of x.

15 In a circle, chords $\overline{AB}$ and $\overline{CD}$ intersect at E. If $AE = 21$, $EB = 5$, and $ED = 7$, find CE.

16 Chords $\overline{XY}$ and $\overline{ZW}$ intersect in a circle at P. If $XP = 7$, $PY = 12$, and $WP = 14$, find PZ.

17 In circle O, chords $\overline{AB}$ and $\overline{CD}$ intersect at E, $AE = 3$ inches, $BE = 8$ inches, and CE is 2 inches longer than DE. What is the length of $\overline{DE}$, expressed in inches?

18 In circle O, chords $\overline{AB}$ and $\overline{CD}$ intersect at P. If $AP = a$, $PB = b$, and $CP = c$, what is the length of $\overline{PD}$?
1) $\frac{ab}{c}$
2) $\frac{ac}{b}$
3) $\frac{bc}{a}$
4) $\frac{a+b}{c}$

19 In a circle, a chord of 10 centimeters bisects a chord of 8 centimeters. The length of the shorter segments of the 10-centimeter chord is?
1) 5 cm
2) 2 cm
3) 8 cm
4) 4 cm

G.C.A.2: Chords, Secants and Tangents 2
Answer Section

1 ANS:
10

REF: 010206siii
2 ANS:
8

REF: 089506siii
3 ANS:
15

REF: 018408siii
4 ANS:
8

REF: 010103siii
5 ANS:
10

REF: 068705siii
6 ANS:
6

REF: 088702siii
7 ANS:
16

REF: 080212siii
8 ANS:
3

REF: 089738siii
9 ANS: 2 REF: 089020siii
10 ANS:
8

REF: 018707siii
11 ANS: 3 REF: 068519siii
12 ANS:
10

REF: 068008siii

13 ANS:
4

REF: 088407siii
14 ANS:
2

REF: 088607siii
15 ANS:
15

REF: 069503siii
16 ANS:
6

REF: 069612siii
17 ANS:
4

REF: 010015siii
18 ANS: 1 REF: 069022siii
19 ANS: 2 REF: 088921siii