

G.G.53: Segments Intercepted by Circle 6: Investigate, justify, and apply theorems regarding segments intersected by a circle: along two intersecting chords of a given circle

- 1 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
- 2 Chords \overline{AB} and \overline{CD} of circle O intersect at E . If $AE = 4$, $EB = 5$, and $CE = 2$, find ED .
- 3 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} .
- 4 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 .
- 5 In a circle, chords \overline{AB} and \overline{CD} intersect at E . If $AE = 21$, $EB = 5$, and $ED = 7$, find CE .
- 6 Chords \overline{XY} and \overline{ZW} intersect in a circle at P . If $XP = 7$, $PY = 12$, and $WP = 14$, find PZ .
- 7 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?
- 8 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) $\frac{a+b}{c}$
- 9 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

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1 ANS: 3 REF: 068519siii

2 ANS:
10

REF: 068008siii

3 ANS:
4

REF: 088407siii

4 ANS:
2

REF: 088607siii

5 ANS:
15

REF: 069503siii

6 ANS:
6

REF: 069612siii

7 ANS:
4

REF: 010015siii

8 ANS: 1 REF: 069022siii

9 ANS: 2 REF: 088921siii