

# Answer Key

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## Lesson 10.6

### Practice Level C

1. 3.7   2. 2.3   3. 7.4   4. 2.5   5. 1   6. 3.9

7. 14.3   8. 5   9. 10   10. 3   11. 6   12. 5

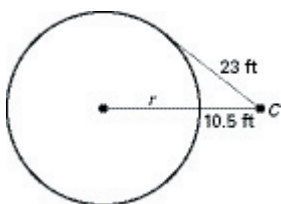
13. *Sample answer:* When you use the theorem to solve for  $x$  and  $y$  you get  $x = 26$  and  $y = 39$ . These segments are not possible in the given diagram, so Thm. 10.14 cannot be applied.

14.  $AP = 3$ ,  $PQ = 5$ ,  $QB = 7$ ,  $PD = 18$ ,  $EQ = 4$

15.  $90^\circ$    16.  $\frac{OP}{OQ} = \frac{OR}{OS}$    17. *Sample answer:* By the Segments of Chords Thm.,  $OP(OR) = OS(OQ)$ . But  $OS = OQ$ , so  $OP(OR) = (OQ)^2$ , and by the Division Prop. of Equality,  $\frac{OP}{OQ} = \frac{OR}{OS}$ .

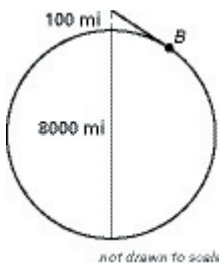
18. *Sample answer:* By the Segments of Secants and Tangents Thm.,  $OP(OQ) = (OT)^2$  and  $OR(OS) = (OT)^2$ . Therefore,  $OP(OQ) = OR(OS)$  by the Transitive Prop. of Equality.

19. a.



b. 39.9 ft

20. a.



b. The segment is the tangent from the satellite to Earth.   c. 900 mi