

Graph.

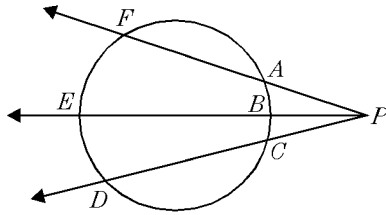
1. In the diagram, 3 secants are drawn. If $PB = 9$ and $BE = 12$, which of the following could be measures of other segments.

a) $PC = 10$ and $CD = 10.8$

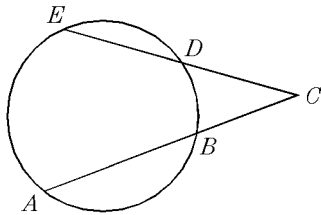
b) $PC = 11$ and $CD = 12.2$

c) $PA = 10$ and $AF = 10$

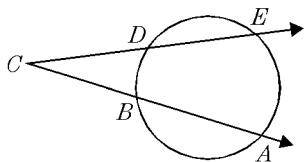
d) $PA = 12$ and $AF = 10$



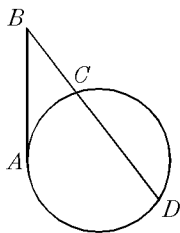
2. In the diagram, $CD = 5$, $ED = 11$, and $BC = 4$. What is the length of \overline{AB} ?



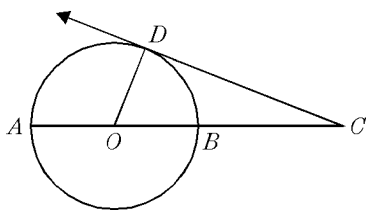
3. In the diagram, $CD = 10$, $DE = 8$, and $BA = 11$. What is the length of \overline{CB} ?



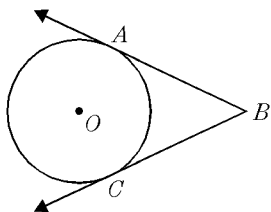
4. In the diagram, $AB = 4$ and $CD = 6$. What is the length of tangent \overline{BC} ?



5. In the diagram, \overline{CD} is tangent to $\odot O$ at point D . If $AO = 6$, $OC = 14$, what is the length of \overline{CD} ?



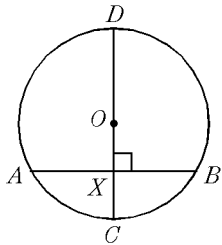
6. In the diagram, $AB = x + 5$ and $CB = 2x - 1$. What is the value of x ?



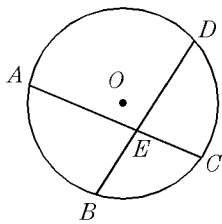
7. In the diagram, \overline{BA} and \overline{BC} are tangent to the circle shown. If $m\widehat{AC} = 60$ and $BC = 12$ units, what is the length of a segment that would connect points A and C ?

8. Assume that Earth is spherical with a diameter of 12,800 km. You are in a sailboat approaching an island with a mountain on it that is 4000 m high. If it is clear, approximately how far away from the mountain will you be when you first see its top?

9. In the diagram, if $AB = 14$ and $\overline{CD} \perp \overline{AB}$, what is the length of \overline{AX} ?

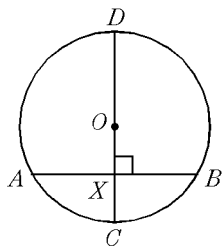


10. In the diagram, chord \overline{AC} bisects chord \overline{BD} , $AE = 7$, and $EC = 4$. What is the length of BD ?

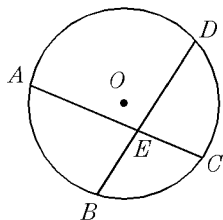


11. In the diagram, $AE = x + 4$, $ED = x$, $BE = x - 1$, and $EC = x - 2$. Solve for x .

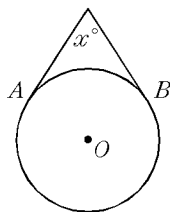
12. In the diagram, $AB = 20$, $OX = 11$ and $\overline{CD} \perp \overline{AB}$. What is the length of \overline{OD} ?



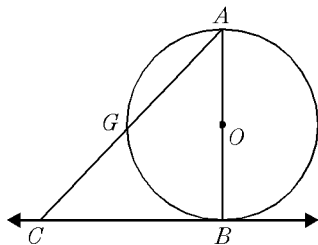
13. In the diagram, two chords of circle O , \overline{AC} and \overline{BD} , intersect at E . $m\widehat{AB} = 88$ and $m\widehat{DC} = 62$. What is the measure of $\angle AEB$?



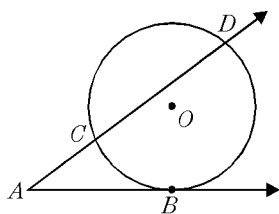
14. In the diagram, what is the value of x if $m\widehat{AB} = 100$?



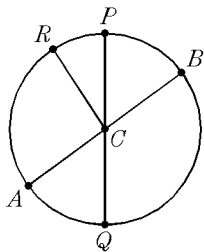
15. In the diagram, \overleftrightarrow{BC} is a tangent to $\odot O$ at point B and $m\angle ACB = 47$. What is the measure of \widehat{BG} ?



16. In the diagram, $m\widehat{BD} = 160$, and $m\angle A = 35$. Find $m\widehat{BC}$.

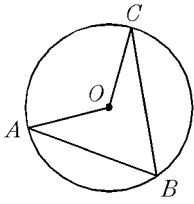


17. In circle C , \overline{AB} and \overline{PQ} are diameters, $m\angle BCP = 52$, and $m\angle ACR = 93$. Find the following measures.

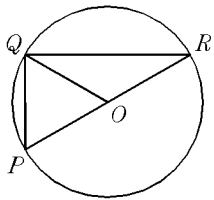


- $m\angle ACQ$
- $m\angle BCQ$
- $m\angle RCP$
- $m\widehat{AQ}$
- $m\widehat{ABR}$

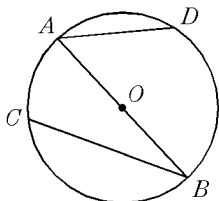
18. In the diagram, \overline{AO} and \overline{OC} are radii of circle O and \overline{AB} and \overline{BC} are chords. If $m\angle AOC = 130$, what is the measure of the inscribed angle $\angle ABC$?



19. In the diagram, $\odot O$ has radius \overline{OQ} drawn, \overline{PR} is the diameter, and $m\angle POQ = 50$. Find the measures of the given angles.



- a) $m\angle PQR = \underline{\hspace{2cm}}$
 b) $m\angle PRQ = \underline{\hspace{2cm}}$
 c) $m\angle QPR = \underline{\hspace{2cm}}$
 d) $m\angle QOR = \underline{\hspace{2cm}}$
20. In the diagram, $\odot O$ has diameter \overline{AB} , and chords \overline{CB} and \overline{AD} drawn. $m\angle CBA = 30$ and $m\widehat{AD} = 88$. What are the measures of $\angle DAB$ and \widehat{CB} , respectively?



21. $x^2 + (y + 7)^2 = 100$

22. $(x + 3)^2 + (y - 1)^2 = 81$

23. $(x + 5)^2 + (y + 1)^2 = 18$

24. Find the equation of the circle with center $(4, -3)$ and radius $r = 3$.

25. Find the equation of the circle with center $(-2, 3)$ and radius $r = 5$.

Untitled 6/1/2010

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| <p>1.
Answer: a
CodePath: EAS.GEO.I.J.1</p> <p>2.
Answer: 16 units
CodePath: EAS.GEO.I.J.4</p> <p>3.
Answer: 9 units
CodePath: EAS.GEO.I.J.8</p> <p>4.
Answer: 2
CodePath: EAS.GEO.I.J.13</p> <p>5.
Answer: $4\sqrt{10}$ units
CodePath: EAS.GEO.I.J.17</p> <p>6.
Answer: 6
CodePath: EAS.GEO.I.J.25</p> <p>7.
Answer: $12\sqrt{3}$ units
CodePath: EAS.GEO.I.J.30</p> <p>8.
Answer: ≈ 226 km
CodePath: EAS.GEO.I.J.35</p> <p>9.
Answer: 7
CodePath: EAS.GEO.I.G.5</p> <p>10.
Answer: $4\sqrt{7}$
CodePath: EAS.GEO.I.G.8</p> <p>11.
Answer: $\frac{8}{3}$
CodePath: EAS.GEO.I.G.14</p> <p>12.
Answer: $\sqrt{221}$ units
CodePath: EAS.GEO.I.G.18</p> <p>13.
Answer: 75°
CodePath: EAS.GEO.I.F.1</p> <p>14.
Answer: 80°
CodePath: EAS.GEO.I.F.5</p> | <p>15.
Answer: 86°
CodePath: EAS.GEO.I.F.10</p> <p>16.
Answer: 90
CodePath: EAS.GEO.I.F.14</p> <p>17.
Answer: 52; 128; 35; 52; 267
CodePath: EAS.GEO.I.E.1</p> <p>18.
Answer: 65°
CodePath: EAS.GEO.I.E.19</p> <p>19.
Answer: 90; 25; 65; 130
CodePath: EAS.GEO.I.E.22</p> <p>20.
Answer: 46°; 120°
CodePath: EAS.GEO.I.E.29</p> <p>21.
Answer: $(0, -7)$, $r = 10$
CodePath: EAS.TRI.J.B.20</p> <p>22.
Answer: $(-3, 1)$, $r = 9$
CodePath: EAS.TRI.J.B.22</p> <p>23.
Answer: $(-5, -1)$, $r = 3\sqrt{2}$
CodePath: EAS.TRI.J.B.30</p> <p>24.
Answer: $(x - 4)^2 + (y + 3)^2 = 9$
CodePath: EAS.TRI.J.E.55</p> <p>25.
Answer: $(x + 2)^2 + (y - 3)^2 = 25$
CodePath: EAS.TRI.J.E.54</p> |
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