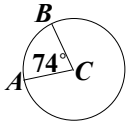
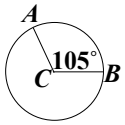
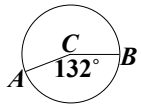
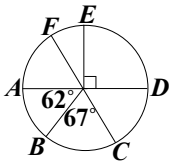
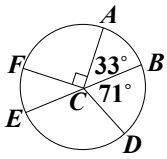
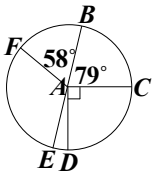
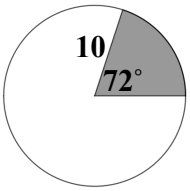
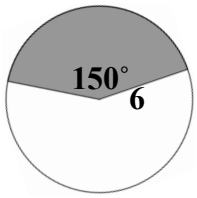
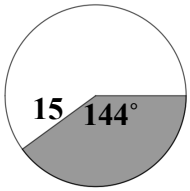
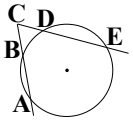
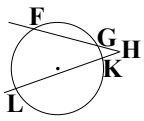
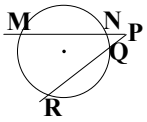
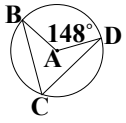
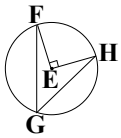
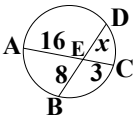
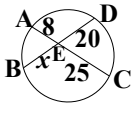
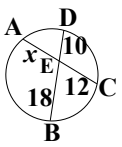
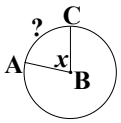
Name: _____

Unit 8 Study Guide

1A. Given the central angle, what is the $m\widehat{AB}$? 	1B. Given the central angle, what is the $m\widehat{AB}$? 	1C. Given the central angle, what is the $m\widehat{AB}$? 
2A. Given the circle, what is the $m\widehat{DF}$? 	2B. Given the circle, what is the $m\widehat{DF}$? 	2C. Given the circle, what is the $m\widehat{DF}$? 
3A. Determine the area of the sector in terms of pi. 	3B. Determine the area of the sector in terms of pi. 	3C. Determine the area of the sector in terms of pi. 
4A. If $m\widehat{AE} = 164^\circ$ and $m\widehat{BD} = 26^\circ$, what is $m\angle ACE$? 	4B. If $m\widehat{FL} = 98^\circ$ and $m\widehat{GK} = 14^\circ$, what is $m\angle FHL$? 	4C. If $m\widehat{MR} = 113^\circ$ and $m\widehat{NQ} = 17^\circ$, what is $m\angle MPR$? 
5A. The endpoints of $\angle BAD$ in a circle form another angle with vertex point C. What is the measure of $\angle BCD$? 	5B. The endpoints of $\angle FEH$ in a circle form another angle with vertex point G. What is the measure of $\angle FGH$? 	5C. The endpoints of diameter $\overline{LM}$ in a circle form an angle with point N. What is the measure of $\angle LNM$?
6A. In the circle, chords $\overline{AC}$ and $\overline{BD}$ intersect at point E. The lengths in feet of each segment are shown. What is the length of $\overline{DE}$? 	6B. In the circle, chords $\overline{AC}$ and $\overline{BD}$ intersect at point E. The lengths in feet of each segment are shown. What is the length of $\overline{BE}$? 	6C. In the circle, chords $\overline{AC}$ and $\overline{BD}$ intersect at point E. The lengths in feet of each segment are shown. What is the length of $\overline{AE}$? 

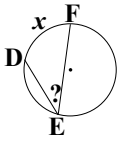
7A. In the circle, central angle $\angle ABC$ measures x degrees. What would describe $m\widehat{AC}$?

a. $\frac{1}{2}x$
b. x
c. $2x$
d. $4x$



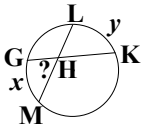
7B. In the circle, the arc $\widehat{DF}$ measures x degrees. What would describe $m\angle DEF$?

a. $\frac{1}{2}x$
b. x
c. $2x$
d. $4x$

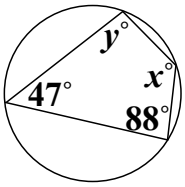


7C. In the circle, the arc $\widehat{GM}$ measures x degrees, while $\widehat{LK}$ measures y degrees. What would describe $m\angle GHM$?

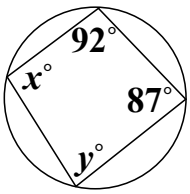
a. $2(x+y)$
b. $2(x-y)$
c. $\frac{1}{2}(x+y)$
d. $\frac{1}{2}(x-y)$



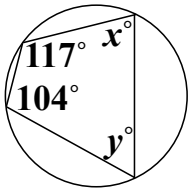
8A. A quadrilateral is inscribed in a circle. Determine the value of x and y.



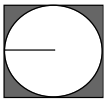
8B. A quadrilateral is inscribed in a circle. Determine the value of x and y.



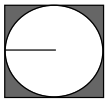
8C. A quadrilateral is inscribed in a circle. Determine the value of x and y.



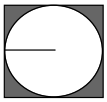
9A. A circle is inscribed in a square. If the radius of the circle is 5 meters, what is the area of the shaded region? Write your answer in terms of pi.



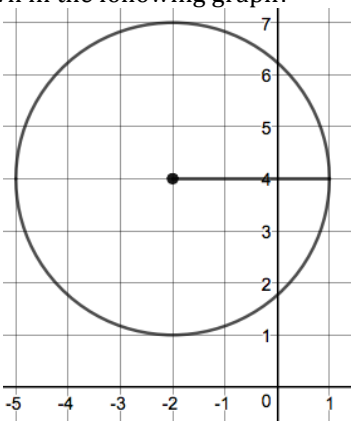
9B. A circle is inscribed in a square. If the radius of the circle is 9 meters, what is the area of the shaded region? Write your answer in terms of pi.



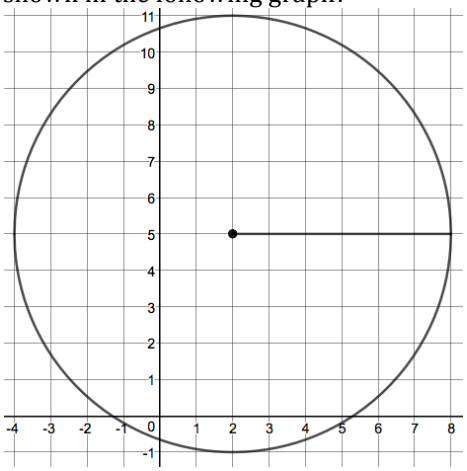
9C. A circle is inscribed in a square. If the radius of the circle is 12 meters, what is the area of the shaded region? Write your answer in terms of pi.



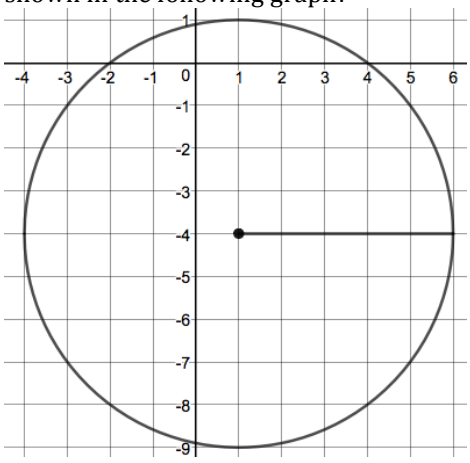
10A. What is the equation of the circle shown in the following graph?



10B. What is the equation of the circle shown in the following graph?



10C. What is the equation of the circle shown in the following graph?



Unit 8 Study Guide **Answers**

1A. $m\widehat{AB} = 74^\circ$	1B. $m\widehat{AB} = 105^\circ$	1C. $m\widehat{AB} = 132^\circ$	2A. $m\widehat{DF} = 129^\circ$	2B. $m\widehat{DF} = 166^\circ$	2C. $m\widehat{DF} = 133^\circ$
3A. 20π	3B. 15π	3C. 90π	4A. 69°	4B. 42°	4C. 48°
5A. 74°	5B. 45°	5C. 90°	6A. DE = 6	6B. BE = 10	6C. AE = 15
7A. b. x	7B. c. $\frac{1}{2}x$	7C. C. $\frac{1}{2}(x+y)$	8A. $x = 133^\circ$ $y = 92^\circ$	8B. $x = 93^\circ$ $y = 88^\circ$	8C. $x = 76^\circ$ $y = 63^\circ$
9A. $100 - 25\pi$	9B. $324 - 81\pi$	9C. $576 - 144\pi$	10A. $(x+2)^2 + (y-4)^2 = 9$	10B. $(x-2)^2 + (y-5)^2 = 36$	10C. $(x-1)^2 + (y+4)^2 = 25$