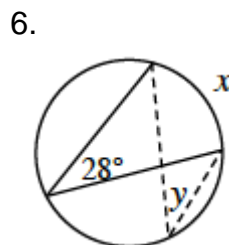
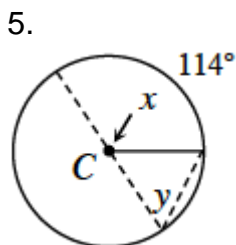
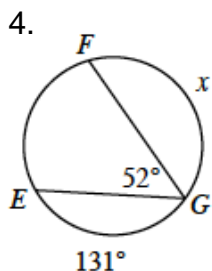
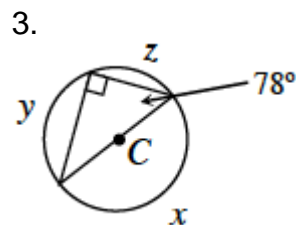
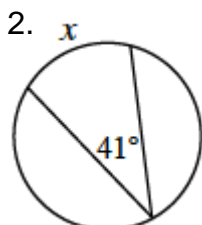
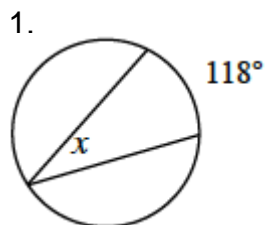


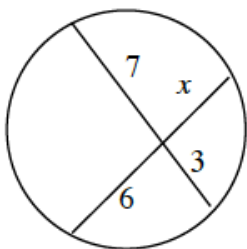
PRACTICE – CIRCLES

Name _____

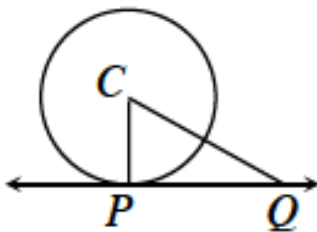
For questions 1 through 6, examine the diagrams below. Find the measures of the indicated angles or arcs. If a point is labeled C, assume it is the center of the circle. Show all work, neatly.



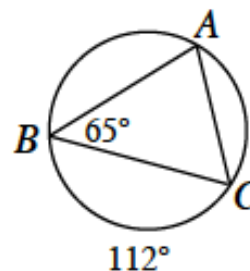
7. Find x.



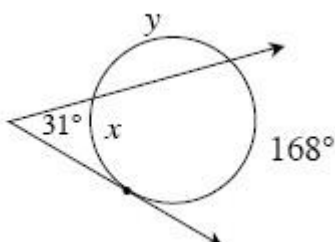
8. \overrightarrow{PQ} is tangent to $\odot C$ at P . If $PQ = 5$ and $CQ = 8$, find CP .



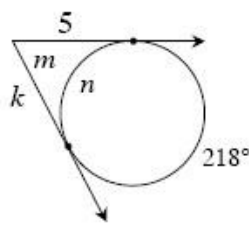
9. $\triangle ABC$ is inscribed in the circle below. Using the measurements provided in the diagram, find $m\widehat{AB}$.



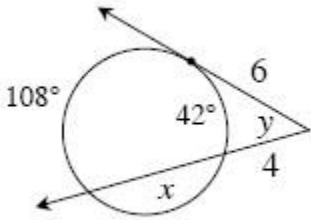
10. Find x and y.



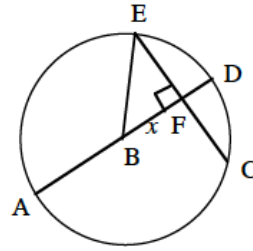
11. Find m and n.



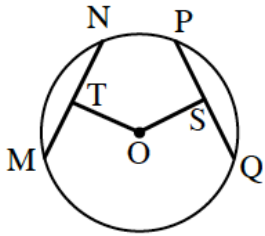
12. Find x and y .



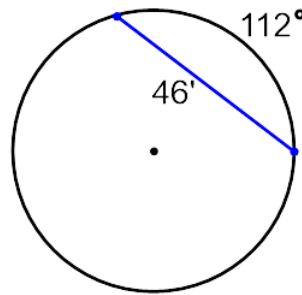
13. In $\odot B$, find x if $EC = 8$ and $AB = 5$.



14. In $\odot O$, $\overline{MN} \cong \overline{PQ}$, $MN = 7x + 13$, and $PQ = 10x - 8$. Solve for x .



15. A $46'$ chord intercepts a 112° arc. Find the radius, circumference, and area of the circle, and the length of the minor arc.



16. Find the equation of a circle with center $(5, -8)$ and radius $= 7$

17. If a circle has the equation $(x+3)^2 + (x-4)^2 = 81$, then find the radius and the center.

THE BIG CIRCLE PUZZLE

You are given the following information - use it wisely:

- O is the center of the circle.
- \overline{DF} and \overline{CA} are diameters of $\odot O$.
- $AB = 10$
- $HI = 6$
- $m\angle HIO = 90$
- $OF = 10$
- $\angle DOA \cong \angle BOF$

Find the measure of each segment, arc, and angle requested below. Mark and label your diagram with all information, including the information that you find. Check your work as you proceed. Do not make any assumptions.

ANSWERS

- | | |
|----------------------------|-----------------------------|
| 1. $CA =$ _____ | 6. $OB =$ _____ |
| 2. $OA =$ _____ | 7. $m\widehat{AB} =$ _____ |
| 3. $m\angle DOA =$ _____ | 8. $m\angle FOB =$ _____ |
| 4. $m\widehat{DB} =$ _____ | 9. $m\widehat{ADB} =$ _____ |
| 5. $GI =$ _____ | 10. $GH =$ _____ |

11. $OI =$ _____

15. $IC =$ _____

12. $m\widehat{CD} =$ _____

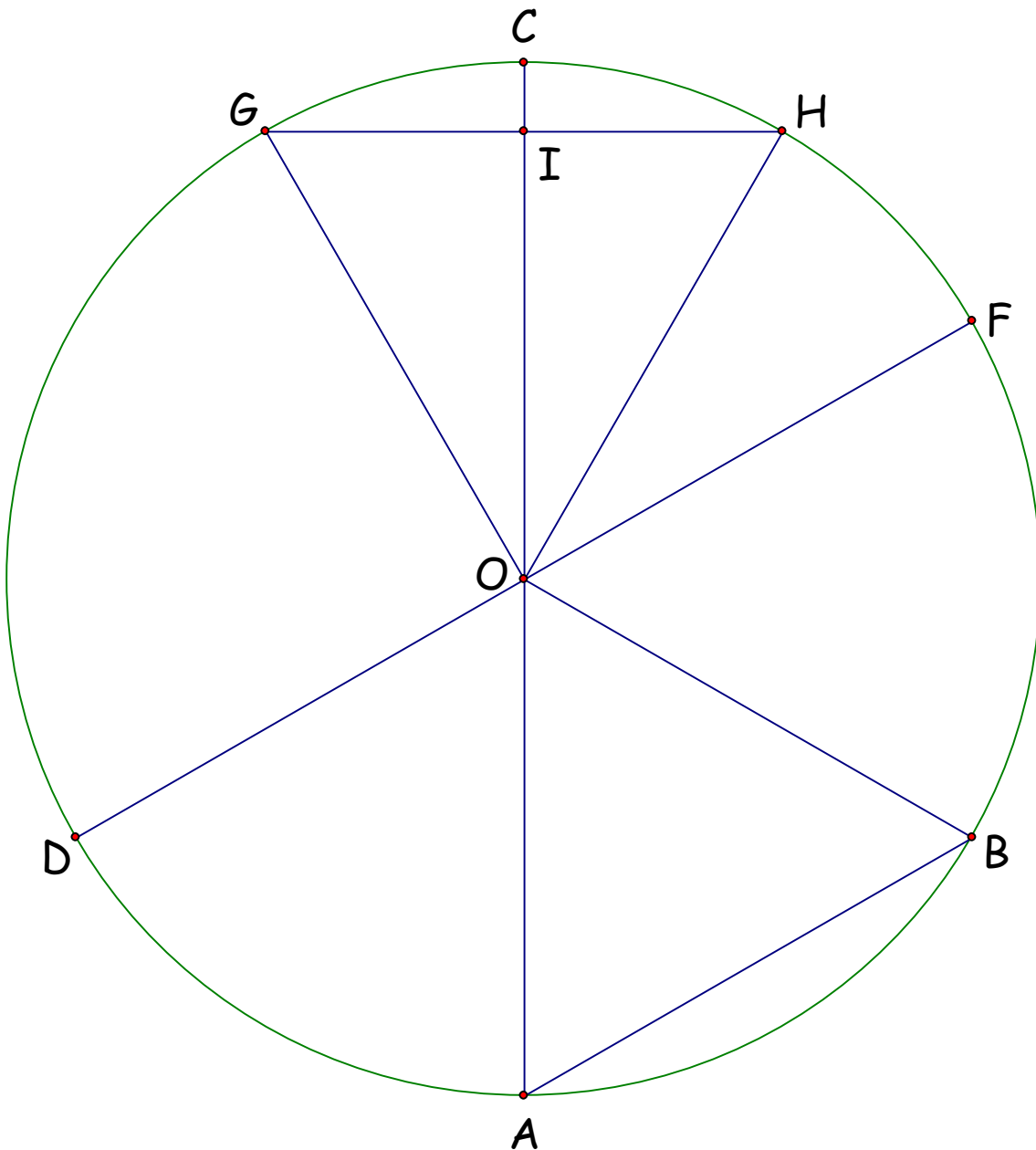
16. $m\widehat{CF} =$ _____

13. $m\angle GIC =$ _____

17. $m\widehat{FDB} =$ _____

14. $m\angle COF =$ _____

18. $m\angle COD =$ _____



THE BIGGER CIRCLE PUZZLE

You are given the following information:

- O is the center of the circle.
- \overline{GF} is tangent to $\odot O$ at D .
- $m\widehat{DE} = 122$
- $m\widehat{AC} = 20$
- $m\widehat{DC} = 90$

Find the measure of each segment, arc, and angle requested below. Mark and label your diagram with all information, including the information that you find. Check your work as you proceed. Do not make any assumptions.

THE BIGGER CIRCLE PUZZLE - ANSWER PAGE

- | | |
|----------------------------|-----------------------------|
| 1. $m\angle EDF =$ _____ | 6. $m\angle DOE =$ _____ |
| 2. $m\angle OED =$ _____ | 7. $m\angle ODE =$ _____ |
| 3. $m\angle BDG =$ _____ | 8. $m\angle BCD =$ _____ |
| 4. $m\angle ADC =$ _____ | 9. $m\angle CDG =$ _____ |
| 5. $m\widehat{AB} =$ _____ | 10. $m\widehat{BE} =$ _____ |

11. $m\angle ADB =$ _____

19. $m\angle DAE =$ _____

12. $m\angle AED =$ _____

20. $m\angle BOE =$ _____

13. $m\angle BDF =$ _____

21. $m\angle CDB =$ _____

14. $m\angle AIB =$ _____

22. $m\angle CHD =$ _____

15. $m\angle DHB =$ _____

23. $m\angle AIC =$ _____

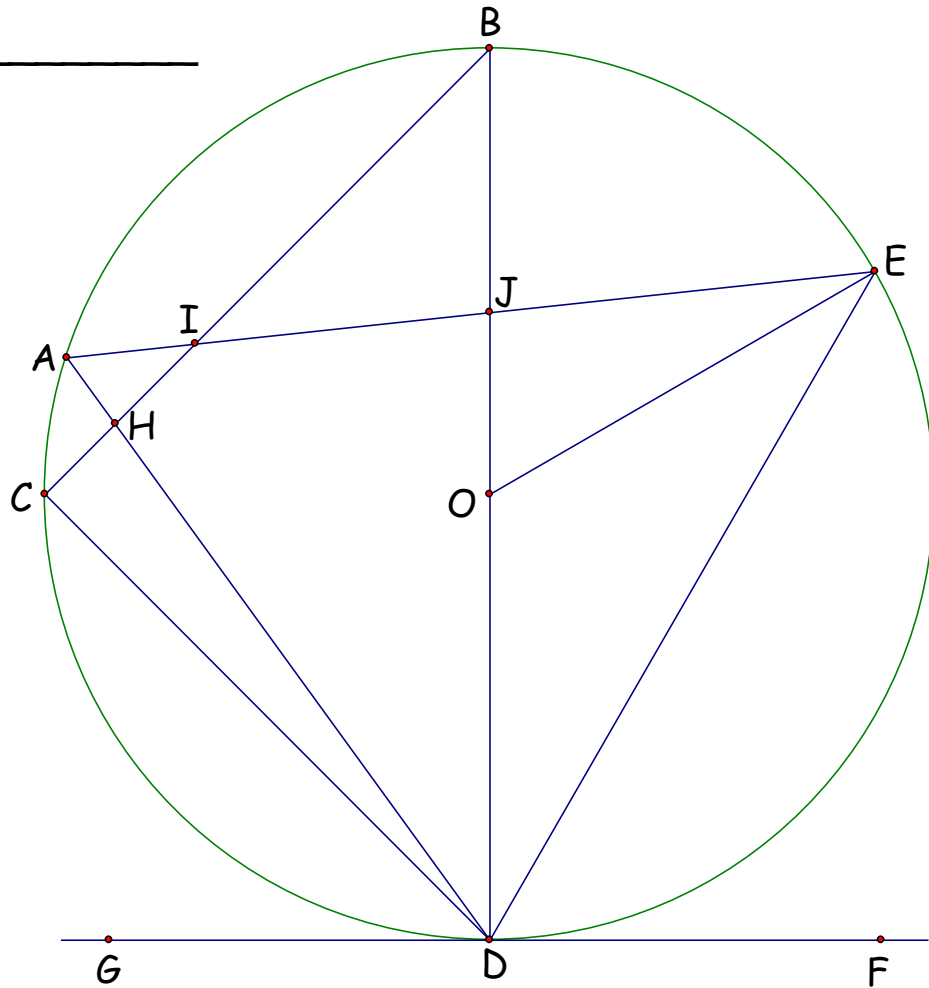
16. $m\angle BIJ =$ _____

24. $m\angle AJB =$ _____

17. $m\angle EJD =$ _____

25. $m\angle AJD =$ _____

18. $m\angle JEO =$ _____



THE BIGGEST CIRCLE PUZZLE

You are given the following information:

- O is the center of the circle.
- \overline{AB} , \overline{CD} , and \overline{EF} are diameters of $\odot O$.
- $m\widehat{GB} = 26$
- $m\angle AOC = 30$, $m\angle OAH = 50$, $m\angle AHF = 65$, and $m\angle IGA = 24$
 $IF = 10.5$, $PI = 4.5$, $PC = 3.4$, $CM = 10$, and $HM = 7.5$

Find the measure of each segment, arc, and angle requested below. Mark and label your diagram with all information, including the information that you find. Check your work as you proceed. Do not make any assumptions.

THE BIGGEST CIRCLE PUZZLE - ANSWER PAGE

- | | |
|----------------------------|-----------------------------|
| 1. $m\widehat{CB} =$ _____ | 6. $m\angle AJC =$ _____ |
| 2. $m\widehat{CG} =$ _____ | 7. $m\angle FOB =$ _____ |
| 3. $m\widehat{FG} =$ _____ | 8. $m\angle FPC =$ _____ |
| 4. $m\angle FIG =$ _____ | 9. $m\widehat{FI} =$ _____ |
| 5. $m\angle IKF =$ _____ | 10. $m\widehat{AE} =$ _____ |

11. $m\angle ELD =$ _____

14. $CD =$ _____

12. $m\angle COF =$ _____

15. $FM =$ _____

13. $m\angle FNB =$ _____

