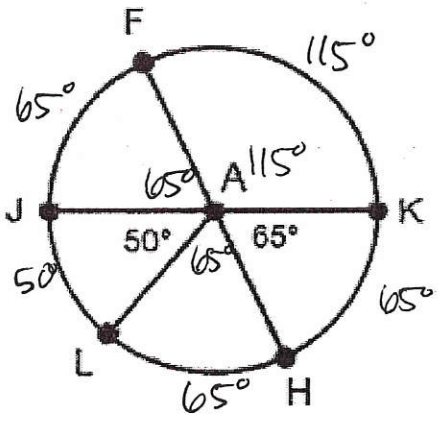
Name: Key Hour: _____ 12.2 Arcs and Angles

Ready

1. $\overline{FH}$ and $\overline{JK}$ are diameters. Find the measure of each angle or arc.



a. $m\angle FAJ$ 65°

b. $m\angle LAH$ 65°

c. $m\angle KAF$ 115°

d. $m\overset{\frown}{JL}$ 50°

e. $m\overset{\frown}{LH}$ 65°

f. $m\overset{\frown}{HK}$ 65°

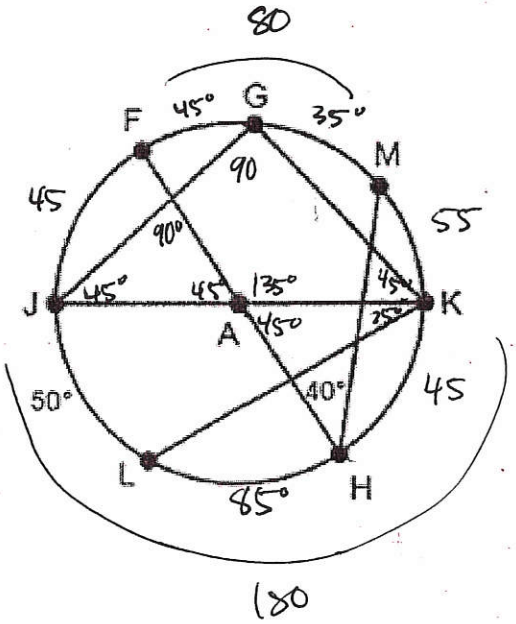
g. $m\overset{\frown}{KF}$ 115°

h. $m\overset{\frown}{JF}$ 65°

i. $m\overset{\frown}{JH}$ 50+65 115°

j. $m\overset{\frown}{JHF}$ 50 + 65 + 65 + 115 295°

2. $\overline{FH}$ and $\overline{JK}$ are diameters, $m\angle FHM = 40°, m\angle GJK, m\angle JKG = 45°, m\angle FAJ, m\angle KAH = 45°$, and $m\overset{\frown}{JL} = 50°$. Find the measure of each angle or arc.



a. $m\overset{\frown}{JF}$ 45°

b. $m\overset{\frown}{LH}$ 85°

c. $m\angle JKL$ 25°

d. $m\overset{\frown}{FM}$ 40°

e. $m\angle HAK$ 45°

f. $m\overset{\frown}{HK}$ 45°

g. $m\overset{\frown}{KF}$ 45+35+55 135°

h. $m\overset{\frown}{KH}$ 45°

i. $m\overset{\frown}{JGK}$ 180°

j. $m\overset{\frown}{MK}$ 55°

Set

True or False.

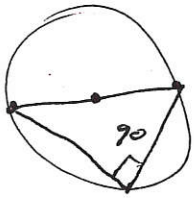
3. An angle inscribed in a circle with endpoints on the diameter has a measure of 90°. T

4. Two inscribed angles that intercept the same arc are complementary. F - congruent

5. The sides of an inscribed angle are chords. T

6. The measure of the central angle is double its intercepted arc. F $\angle$ = arc

7. The measure of an inscribed angle is half the measure of its intercepted arc. T $\angle = \frac{arc}{2}$



Go!

Find each measure in ⊙P if $m\angle WPX = 28°$, $m\angle ZPY = 38°$, and $\overline{WZ}$ and $\overline{XV}$ are diameters.

8. $\overset{\frown}{YZ}$ 38°

9. $\overset{\frown}{YZ}$ 38°

10. $\angle VPZ$ 28°

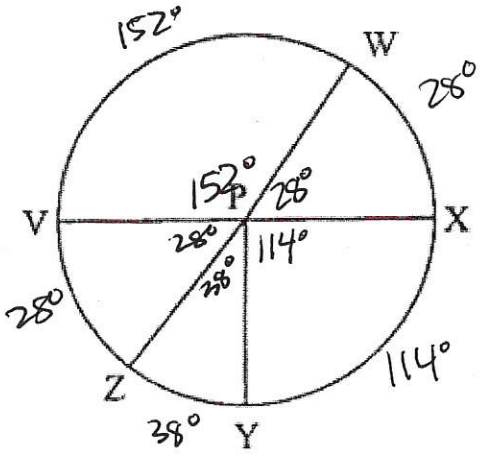
11. $\overset{\frown}{VWX}$ 180°

12. $\angle XPY$ 114°

13. $\overset{\frown}{XY}$ 114°

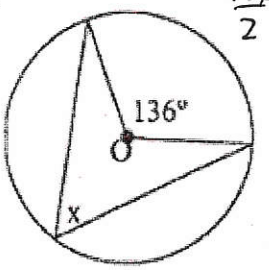
14. $\overset{\frown}{XWY}$ 360 − 114 = 246°

15. $\overset{\frown}{WZX}$ 360 − 28 = 332°

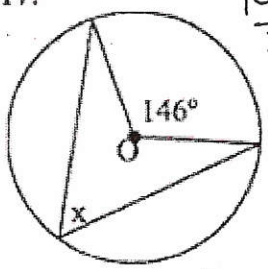


In each of the following figures, O is the center of the circle. Calculate the values of x and justify your answer.

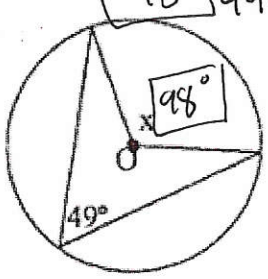
16. $\frac{136}{2} = 68°$



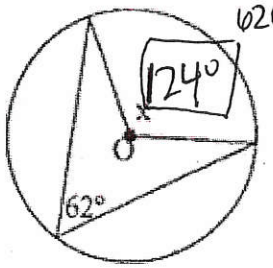
17. $\frac{146}{2} = 73°$



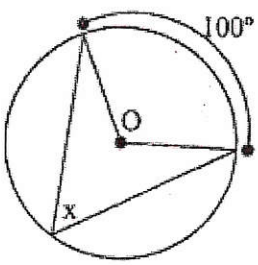
18. 98°, 49(2)



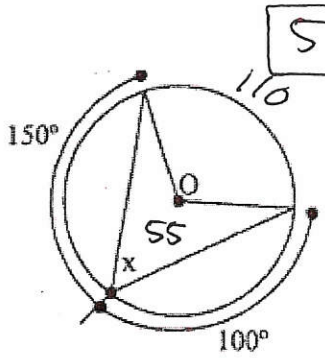
19. 62(2) 124°



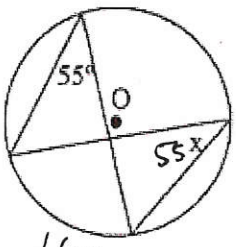
20. 100° 50°



21. 55°, 110

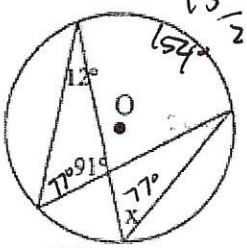


22. 55°

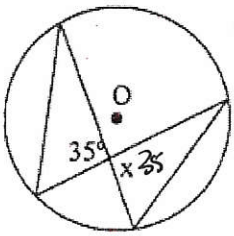


160

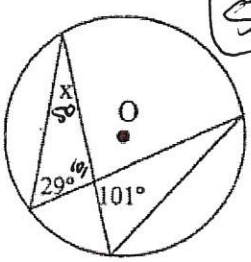
23. $\frac{154}{2}$ = 77°



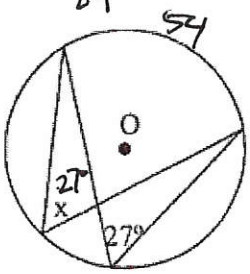
24. 35°



25. 50°



26. 24, 54°, 27°



27. 180°, 39