

CCGPS Geometry

Use properties of angles to solve the following.

1. Find the following measures:

$\angle HIE =$

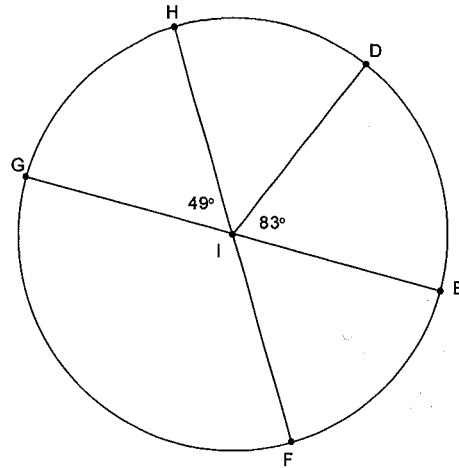
$\widehat{FDG} =$

$\widehat{HD} =$

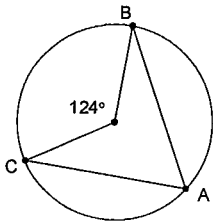
$\angle FIE =$

$\widehat{EDG} =$

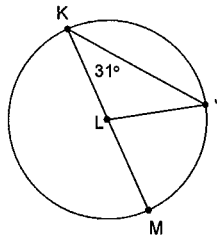
$\widehat{HEG} =$



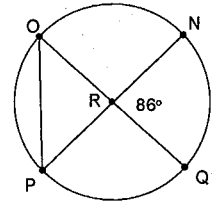
2.  $m\angle BAC =$  \_\_\_\_\_



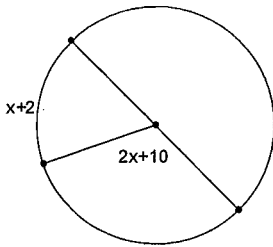
3.  $m\widehat{JM} =$  \_\_\_\_\_



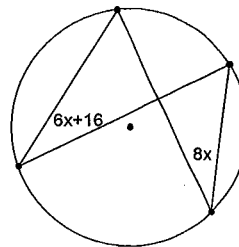
4.  $m\angle OPN =$  \_\_\_\_\_



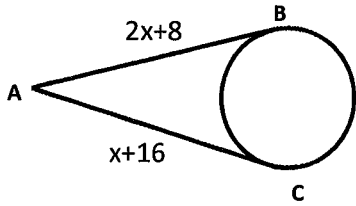
5. Find x.



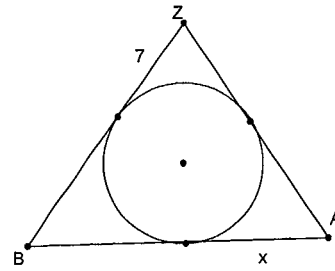
6. Find x.



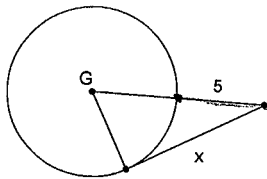
7. Find  $x$ .



8. If  $ZA = 15$ , Find  $x$ .

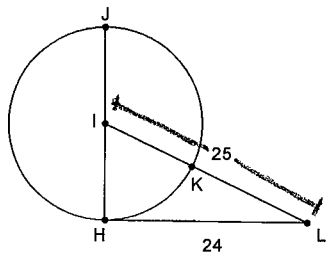


9. The radius of Circle G is 6cm. Find  $x$ .



15. Find the length of the diameter  $\overline{JH}$

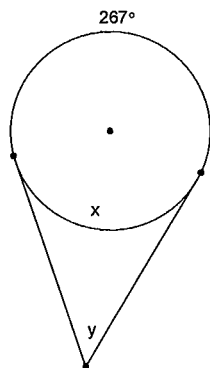
Find the length of the segment  $\overline{KL}$



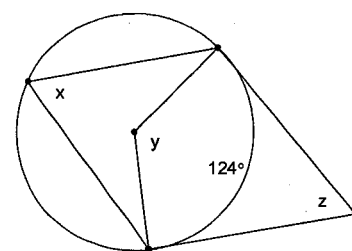
Find the measure of  $\widehat{KH}$  (Use trig)

Assume that lines that appear to be tangent are tangent.

17. Find  $x$  &  $y$ .



18. Find  $x$ ,  $y$ , and  $z$ .

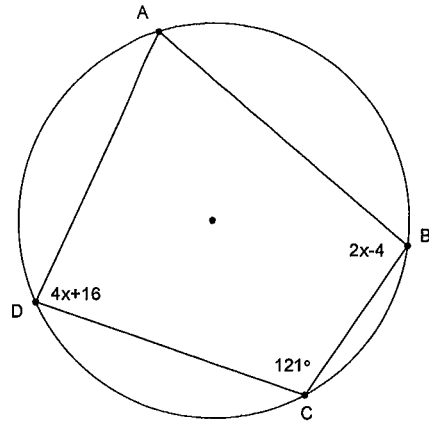


19. Find the measures of the angles

$\angle A =$

$\angle B =$

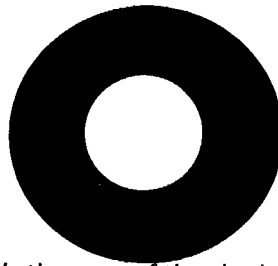
$\angle D =$



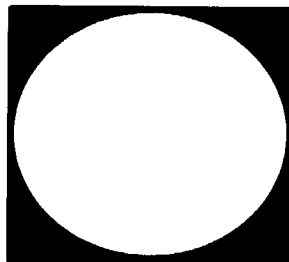
20. Given that a certain arc length is  $8\pi$ , and its central angle is  $80^\circ$ , find the exact radius of the circle.

21. Given that the area of a circle is  $81\pi$ , find the radius and use it to calculate the length of  $115^\circ$  arc from the same circle.

22. The circles are concentric. The radius of the smaller circle is 8cm. The radius of the bigger circle is 10. What's the exact area shaded?

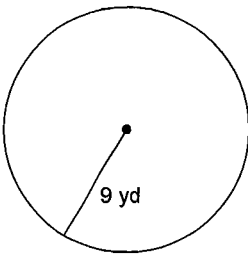


23. If the area of the square is 144, what's the area of the shaded region?

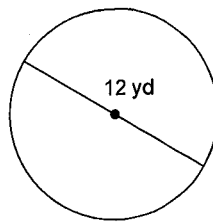


Find the area & circumference of each. Answers should be exact (in terms of  $\pi$ ).

24)

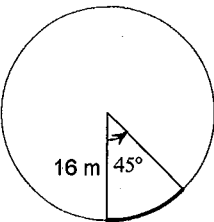


25)

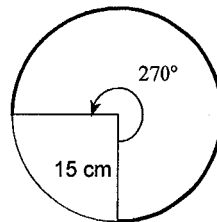


Find the length of each arc.

26)

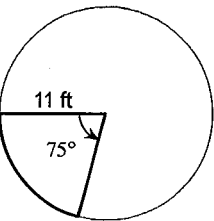


27)

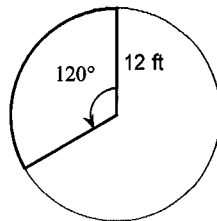


Find the area of each sector.

28)



29)



Convert each degree measure into radians.

30)  $270^\circ$

31)  $60^\circ$

Convert each radian measure into degrees.

32)  $\frac{5\pi}{9}$

33)  $\frac{\pi}{4}$

34. Find the arc length of an arc measuring  $\frac{5\pi}{2}$  radians if the radius is 12 cm.