Circles 2.3 **KEY**

Geometry

1) State the ratio that defines pi.

C/d = π

Give the number of letters to name each object below.

2) Major arc **3** 3) Radius **2** 4) Chord **2**

Use the information given in each problem below and the figure at the right to answer each question.

5) r = 3 in. Find d.
d = (3 in)2 = 6 in.

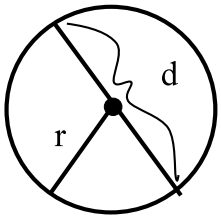
6) d = 34 cm. Find r.
r = (34 cm)/2 = 17 cm.

7) r = 115 m. Find d.
d = (115 m)2 = 230 m.

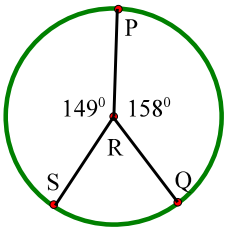
8) r = 32 yds. Find d.
d = (32 yds)2 = 64 yds.

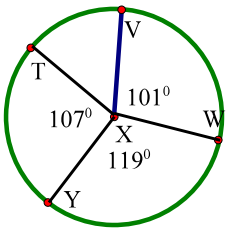
9) d = 98 ft. Find r.
r = (98 ft)/2 = 49 ft

10) d = 237 km. Find r.
r = (237 km)/2 = 118.5 cm



Use the figures at the right to find the indicated arc measure.





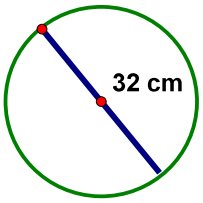
11) $m\overset{\frown}{PQ} = 158°$ 12) $m\overset{\frown}{SQ} = 53°$ 13) $m\overset{\frown}{PSQ} = 202°$

14) $m\overset{\frown}{WY} = 119°$ 15) $m\overset{\frown}{WT} = 134°$ 16) $m\overset{\frown}{WYT} = 226°$

17) $m\overset{\frown}{VWY} = 220°$ 18) $m\overset{\frown}{VY} = 140°$ 19) $m\overset{\frown}{WVY} = 241°$ 20) $m\overset{\frown}{WTY} = 241°$

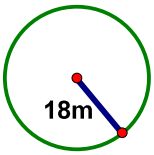
Find the circumference of the circle in each problem below in terms of pi and to the nearest tenth.

21)



C = (32 cm)(π)
C = 32(π) cm
C = 100.5cm

22)



d = 36 m
C = (36 m)(π)
C = 36(π) m
C = 113.1 m

23) r = 11 ft

d = 22 ft
C = 22π ft
C = 69.1 ft

24) d = 26 in

C = 26π in
C = 81.7 in

Given the circumference of a circle, find its' radius and diameter to the nearest tenth.

31) c = 9π m
d = (9π m)/π
d = 9 m
r = 4.5 m

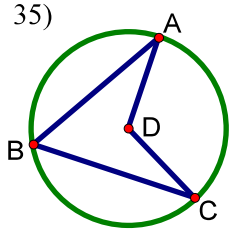
32) c = 44π yds
d = (44π yds)/π
d = 44 yds
r = 22 yds

33) c = 82 ft
d = (82 ft)/π
d = 26.1 ft
r = 13.1 ft

34) c = 764 cm
d = (764 cm)/π
d = 243.2 cm
r = 121.6 cm

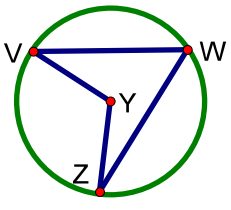
Given the measure of an arc, name its' central and inscribed angles and give their measures.

35)



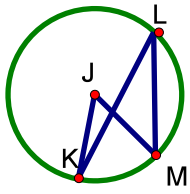
Arc AC = 128°

36)



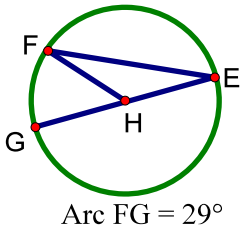
Arc VZ = 108°

37)



Arc KM = 32°

38)



Arc FG = 29°

Central - m∠ADC = 128° **Central - m∠VYZ = 108°** **Central - m∠KJM = 32°** **Central - m∠FHG = 29°**
Inscribed-m∠ABC = 64° **Inscribed-m∠VWZ = 56°** **Inscrbd-m∠KLM = 16°** **Inscrbd-m∠FEG = 14.5°**