

Circles 2.1(KEY)

1) Give the ratio that defines pi.

$$C/d = \pi$$

Give the number of letters to name each object below.

2) Diameter **2**

3) Tangent **2**

4) Minor arc **2**

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

5)  $r = 8$  in. Find  $d$ .

6)  $r = 15$  yds. Find  $d$ .

7)  $r = 32$  m. Find  $d$ .

$$d = (8 \text{ in})2 = \mathbf{16 \text{ in.}}$$

$$d = (15 \text{ yds})2 = \mathbf{30 \text{ yds.}}$$

$$d = (32 \text{ m})2 = \mathbf{64 \text{ m}}$$

8)  $d = 26$  cm. Find  $r$ .

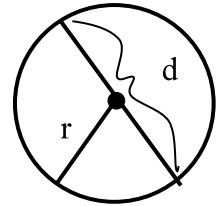
9)  $d = 14$  ft. Find  $r$ .

10)  $d = 49$  km. Find  $r$ .

$$r = (26 \text{ cm})/2 = \mathbf{13 \text{ cm}}$$

$$r = (14 \text{ ft})/2 = \mathbf{7 \text{ ft}}$$

$$r = (49 \text{ km})/2 = \mathbf{24.5 \text{ km}}$$



11)  $d = 111$  mi. Find  $r$ .

12)  $r = 78$  mm. Find  $d$ .

13)  $r = 63$  dm. Find  $d$ .

$$r = (111 \text{ mi})/2 = \mathbf{55.5 \text{ mi}}$$

$$d = (78 \text{ mm})2 = \mathbf{156 \text{ mm}}$$

$$d = (63 \text{ dm})2 = \mathbf{126 \text{ dm}}$$

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

14)  $m\widehat{AB} = \mathbf{168^\circ}$

15)  $m\widehat{EH} = \mathbf{137^\circ}$

16)  $m\widehat{AD} = \mathbf{110^\circ}$

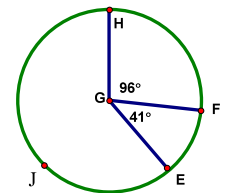
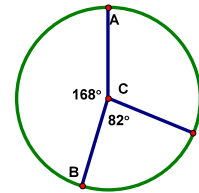
17)  $m\widehat{HJE} = \mathbf{223^\circ}$

18)  $m\widehat{DBA} = \mathbf{250^\circ}$

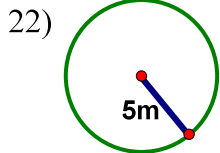
19)  $m\widehat{HE} = \mathbf{137^\circ}$

20)  $m\widehat{ADB} = \mathbf{192^\circ}$

21)  $m\widehat{FHE} = \mathbf{319^\circ}$



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

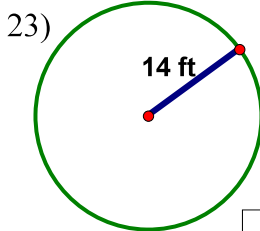


$$d = 10 \text{ m}$$

$$C = (10 \text{ m})(\pi)$$

$$C = \mathbf{10\pi \text{ m}}$$

$$C = \mathbf{31.4 \text{ m}}$$

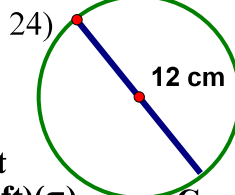


$$d = 28 \text{ ft}$$

$$C = (28 \text{ ft})(\pi)$$

$$C = \mathbf{28\pi \text{ ft}}$$

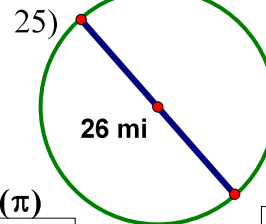
$$C = \mathbf{88.0 \text{ ft}}$$



$$C = (12 \text{ cm})(\pi)$$

$$C = \mathbf{12\pi \text{ cm}}$$

$$C = \mathbf{37.7 \text{ cm}}$$



$$C = (26 \text{ mi})(\pi)$$

$$C = \mathbf{26\pi \text{ mi}}$$

$$C = \mathbf{81.7 \text{ mi}}$$

26)  $r = 9$  mm  
 $d = 18$  mm

$$C = (18 \text{ mm})\pi$$

$$C = \mathbf{18\pi \text{ mm}}$$

$$C = \mathbf{56.5 \text{ mm}}$$

27)  $r = 15$  km  
 $d = 30$  km

$$C = (30 \text{ km})\pi$$

$$C = \mathbf{30\pi \text{ km}}$$

$$C = \mathbf{94.2 \text{ km}}$$

28)  $d = 22$  ft  
 $C = (22 \text{ ft})\pi$

$$C = \mathbf{22\pi \text{ ft}}$$

$$C = \mathbf{69.1 \text{ ft}}$$

29)  $d = 38$  in  
 $C = (38 \text{ in})\pi$

$$C = \mathbf{38\pi \text{ in}}$$

$$C = \mathbf{119.4 \text{ in}}$$

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

30)  $c = 16\pi$  m  
 $d = (16\pi \text{ m})/\pi$

$$d = \mathbf{16 \text{ m}}$$

$$r = \mathbf{8 \text{ m}}$$

31)  $c = 10\pi$  yds  
 $d = (10\pi \text{ yds})/\pi$

$$d = \mathbf{10 \text{ yds}}$$

$$r = \mathbf{5 \text{ yds}}$$

32)  $c = 100$  ft  
 $d = (100 \text{ ft})/\pi$

$$d = \mathbf{31.8 \text{ ft}}$$

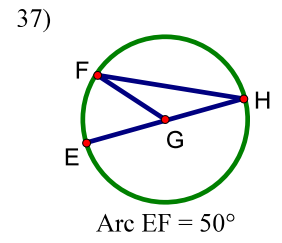
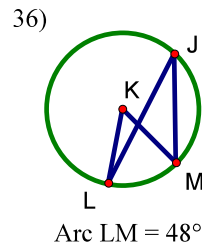
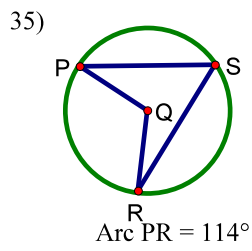
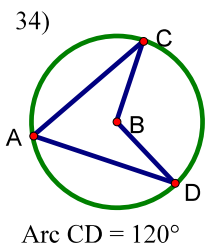
$$r = \mathbf{15.9 \text{ ft}}$$

33)  $c = 264$  cm  
 $d = (264 \text{ cm})/\pi$

$$d = \mathbf{84.0 \text{ cm}}$$

$$r = \mathbf{42 \text{ cm}}$$

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



**Cent. -  $\angle CBD = 120^\circ$**   
**Inscr. -  $\angle CAD = 60^\circ$**

**Cent. -  $\angle PQR = 114^\circ$**   
**Inscr. -  $\angle PSR = 57^\circ$**

**Cent. -  $\angle LKM = 48^\circ$**   
**Inscr. -  $\angle LJM = 24^\circ$**

**Cent. -  $\angle FGE = 50^\circ$**   
**Inscr. -  $\angle FHE = 25^\circ$**