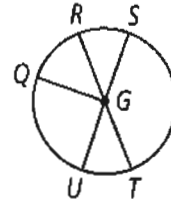


# 10.4 – Circumference and Arc Length

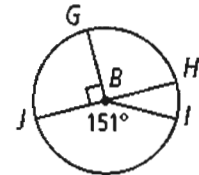
Name the following in  $\odot G$ .

- 1) the minor arcs
- 2) the major arcs
- 3) the semicircles



Find the measure of each arc in  $\odot B$ .

- 4)  $\widehat{GJ}$
- 5)  $\widehat{HI}$
- 6)  $\widehat{HIJ}$
- 7)  $\widehat{GJI}$
- 8)  $\widehat{GHJ}$
- 9)  $\widehat{GJH}$



Find the circumference of each circle. Leave your answers in terms of  $\pi$ .

- 10)   
 $C = 32\pi \text{ in.}$
- 11)   
 $C = 22\pi \text{ m.}$
- 12)   
 $C = 13.6\pi \text{ m.}$

For the following, leave your answers in terms of  $\pi$ .

- 13) If  $r = 10.5 \text{ cm}$ , find  $C$ .  
 $C = 21\pi \text{ cm}$
- 14) If  $C = 25\pi \text{ cm}$ , find  $r$ .  
 $r = 12.5 \text{ cm}$
- 15) If  $C = 9.6\pi \text{ cm}$ , find  $d$ .  
 $d = 9.6 \text{ cm}$
- 16) If  $d = 12 \text{ cm}$ , find  $C$ .  
 $C = 12\pi \text{ cm}$

- 17) What is the circumference of a circle whose radius is 30 cm?

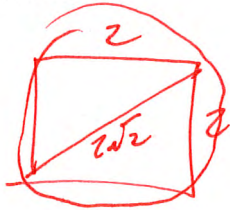
$$C = \pi d$$

$$60\pi \text{ cm}$$

- 18) What is the diameter of a circle whose circumference is  $24\pi$  cm?

$$24 \text{ cm}$$

- 19) A square with sides that measure 2 cm is inscribed in a circle. Find the circumference of the circle.



$$2\sqrt{2}\pi \text{ cm}$$

- 20) A dinner plate fits snugly in a square box with perimeter 48 inches. What is the circumference of the plate?



$$12\pi \text{ in}$$

In the following, round your answer to the nearest 0.1 unit. Use the symbol  $\approx$  to show that your answer is an approximation.

- 21) If  $d = 9.6$  cm, find  $C$ .

$$C \approx 30.1 \text{ cm}$$

- 22) If  $r = 8.1$  cm, find  $C$ .

$$C \approx 50.9 \text{ cm}$$

- 23) If  $C = 132$  cm, find  $d$  and  $r$ .

$$C \approx \pi d$$

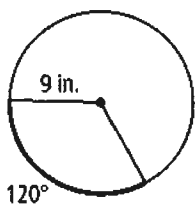
$$132 = 3.14d$$

$$d \approx 42 \text{ cm}$$

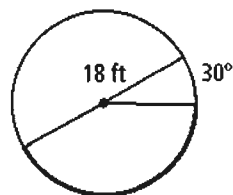
$$r \approx 21 \text{ cm}$$

Find the length of each darkened arc. Leave your answer in terms of  $\pi$ .

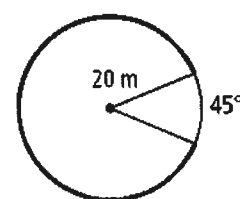
24)



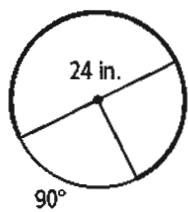
25)



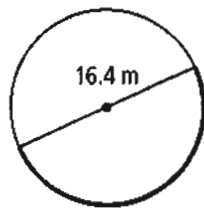
26)



27)



28)



29)

