Name_____ Class_____Date_____

10-6   Circles and Arcs

Find the measure of each arc in ⊙*B*.

4. $\overset{\frown}{GJ}$

5. $\overset{\frown}{HI}$

6. $\overset{\frown}{HIJ}$

7. $\overset{\frown}{GJI}$

8. $\overset{\frown}{GHJ}$

9. $\overset{\frown}{GJH}$

10. $\overset{\frown}{HGJ}$

11. $\overset{\frown}{GH}$

12. $\overset{\frown}{GHI}$

13. $\overset{\frown}{HJI}$

14. $\overset{\frown}{JHI}$

15. $\overset{\frown}{JIG}$
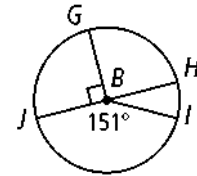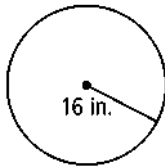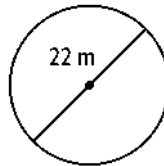
Find the circumference of each circle. Leave your answers in terms of π.

16.

17.

20. The wheels on Reggie's bike each have a 20-in. diameter. His sister's mountain bike has wheels that each have a 26-in. diameter. To the nearest inch, how much farther does Reggie's sister's bike travel in one revolution than Reggie's bike?

21. A Ferris wheel has a 50-m radius. How many kilometers will a passenger travel during a ride if the wheel makes 10 revolutions? Round your answer to the nearest tenth of a kilometer.
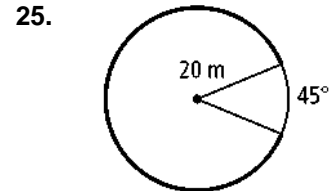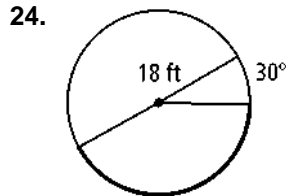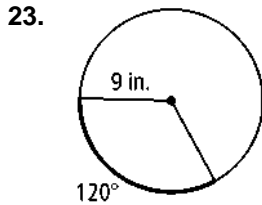
22. The marching band has ordered a banner with its logo. The logo is a circle with a 45° central angle. If the diameter of the circle is 3 ft, what is the length of the major arc to the nearest tenth?

Name_____ Class _____ Date_____

10-6

Practice (continued)   *Form G*

Circles and Arcs

Find the length of each darkened arc. Leave your answer in terms of π.

23.

9 in.

120°

24.

18 ft   30°

25.

20 m

45°

Find each indicated measure for ⊙Y

29. $m\angle EYD$

30. $m\widehat{EAB}$

31. $m\widehat{DB}$

32. $m\angle DYC$

33. $m\widehat{AEC}$

34. $m\widehat{BDA}$

E

Y

D   A

40°

B

C
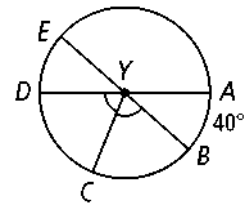
37. In ⊙*B*, the length of $\widehat{ST}$ is 3π in. and $m\widehat{ST}$ is 120. What is the radius of ⊙*B?*

Algebra Find the value of each variable.

38.

X

Y

(2a + 24)°

a°

Z

39.

F

(20a − 30)°   (10a + 2)

(2a + 4)°

G

H