

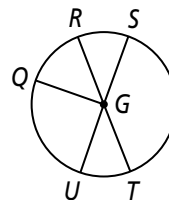
Practice

Form G

Circles and Arcs

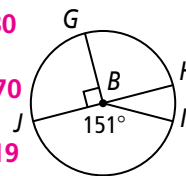
Name the following in $\odot G$.

- the minor arcs **Answers may vary. Sample: \widehat{QR} ; \widehat{QS} ; \widehat{QU} ; \widehat{QT} ; \widehat{RS} ; \widehat{RU} ; \widehat{ST} ; \widehat{TU}**
- the major arcs **Answers may vary. Sample: \widehat{TUS} ; \widehat{TSU} ; \widehat{UTR} ; \widehat{UTQ} ; \widehat{QTS} ; \widehat{QTR} ; \widehat{QST} ; \widehat{STR}**
- the semicircles **\widehat{SQU} ; \widehat{STU} ; \widehat{TUR} ; \widehat{TSR}**

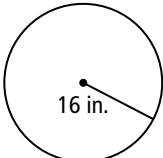
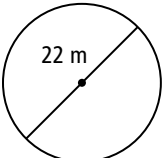
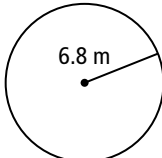


Find the measure of each arc in $\odot B$.

- | | | |
|--------------------------------|--------------------------------|--------------------------------|
| 4. \widehat{GJ} 90 | 5. \widehat{HI} 29 | 6. \widehat{HIJ} 180 |
| 7. \widehat{GJI} 241 | 8. \widehat{GHJ} 270 | 9. \widehat{GJH} 270 |
| 10. \widehat{HGJ} 180 | 11. \widehat{GH} 90 | 12. \widehat{GHI} 119 |
| 13. \widehat{HJI} 331 | 14. \widehat{JHI} 209 | 15. \widehat{JIG} 270 |



Find the circumference of each circle. Leave your answers in terms of π .

- | | | |
|--|--|--|
| 16.  32π in. | 17.  22π m | 18.  13.6π m |
|--|--|--|

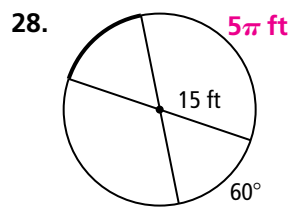
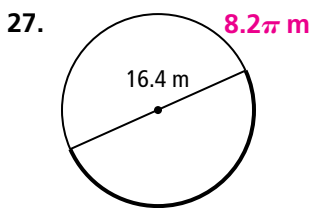
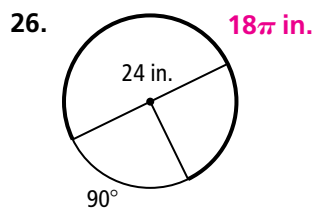
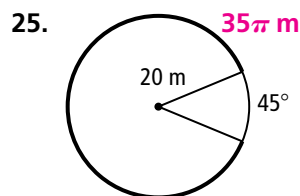
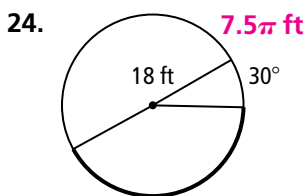
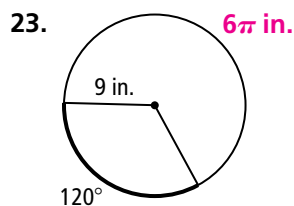
- A dartboard consists of five concentric circles. The radius of the smallest circle is about 1 in. The radius of the second circle is about 3 in. longer. The radius of the third circle is about 1 in. longer than the previous circle. The radius of the fourth circle is about 2 in. longer than the previous circle. The radius of the largest circle is about 0.75 in. greater than the previous circle. What is the difference between the circumferences of the largest and the smallest circle? Round your answer to the nearest tenth of an inch. **42.4 in.**
- 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? **19 in.**
- 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. **3.1 km**
- 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? **8.2 ft**

Practice (continued)

Form G

Circles and Arcs

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



Find each indicated measure for $\odot Y$.

29. $m\angle EYD$
40

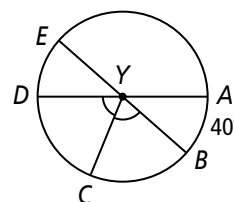
30. $m\widehat{EAB}$
180

31. $m\widehat{DB}$
140

32. $m\angle DYC$
70

33. $m\widehat{AEC}$
250

34. $m\widehat{BDA}$
320

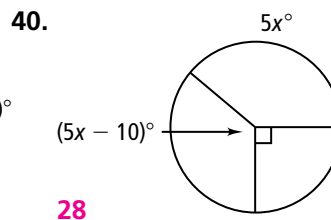
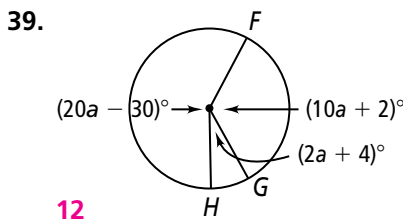
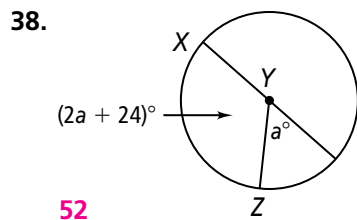


35. Kiley's in-line skate wheels have a 43-mm diameter. How many meters will Kiley travel after 5000 revolutions of the wheels on her in-line skates? Round your answer to the nearest tenth of a meter. **675.4 m**

36. It is 5:00. What is the measure of the minor arc formed by the hands of an analog clock? **150**

37. In $\odot B$, the length of \widehat{ST} is 3π in. and $m\widehat{ST}$ is 120. What is the radius of $\odot B$? **4.5 in.**

Algebra Find the value of each variable.



41. A 45° arc of $\odot D$ has the same length as a 30° arc of $\odot E$. What is the ratio of the radius of $\odot D$ to the radius of $\odot E$? **2 : 3**