$\qquad$

Use $\odot P$ to find the arc measure.
1.


$$
m B C=?
$$

Find the measure of the indicated arc or angle in $\odot O$.
2. $m \angle B A C=?$

3. $m B C=?$

4. $m \angle B A C=?$


Find the value of each variable.
5.

6.

7.

8.

9. Find the area of the shaded region.
10. Find the arc length of the shaded region.

11. The area of one piece of pizza is $9 \pi \mathrm{in}^{2}$. The pizza is cut into eighths. Find the radius of the pizza pie.
12. Determine the radius of the circle with a circumference of $26 \pi \mathrm{~cm}$. Use the radius to then find the area.
13. A sprinkler system can shoot water at a distance of 15 yards. It is set up to rotate 240 degrees. How much area of the yard is covered by the sprinkler?
14. The clock in our classroom has a radius of 9 inches. If it's 4:00, find the arc length and area of the sector for this time.
15. Find $A B$

18. Find $A B$

16. Find TV

19. Find the area of the shaded region

17. Find $P Q$

20. Find length of $\overparen{F G}$


