1. Find the length of the bold arc.

2. The circumference is $100\pi$ in. Find the measure of the diameter.

3. The arc length is $6\pi$ cm and intercepted arc is $120^\circ$. Find the diameter.

4. Find the length of the bold arc.

5. Find the diameter of a circle with a circumference of 50 yd.

6. The arc length is 3.91 inches and the radius is 3 inches. Find the degree measure.

7. Find the perimeter.
8. The arc length of the sector is 22.9 m and the intercepted arc is 18°. Find the diameter.

9. Find the length of the bold arc.

10. The arc length is 12 cm and the intercepted arc is 85°. Find the circumference.

11. The arc length is 14.2 in and the intercepted arc is 132°. Find the radius.

12. A birthday cake is sliced into 8 equal sections. The arc length of one piece of cake is 6.28 inches. Find the diameter of the cake.
13. Find the area of the sector with a DIAMETER of 32 in and an INSCRIBED ANGLE OF 150°.

14. Find the area of the sector with a RADIUS of 18 mm and an CENTRAL ANGLE OF 210°.

15. A circle has a diameter of 30 mm. Find the area of ⅕ of the circle.

16. A circle has an area of $400\pi$ m$^2$. Find the measure of the radius.

17. A circle has an area of 0.79 m$^2$. Find the measure of the radius.

18. A circle has an area of 706.86 m$^2$. Find the measure of the diameter.

19. A sector has an area of $64\pi$ cm$^2$. The arc is 90°. Find the measure of the radius.

20. A sector has an area of 37.71 in$^2$. The radius is 12 in. Find the measure of the intercepted arc.
21. A sector has an area of $40.5\pi$ yd$^2$. The arc is $45^\circ$. Find the measure of the radius.

22. A sector has an area of $18\pi$ yd$^2$. The radius of the sector is 6 yd. Find the measure of intercepted arc.

23. The area of the circle is 96 cm$^2$. Find the diameter.

24. The area of the circle is 64 in$^2$. Find the diameter.

25. The radius of the circle is 4 cm. The measure of the intercepted arc is $80^\circ$. Find the area of the sector.

26. Find the radius of the circle with an area of 50 m$^2$.

27. A sector has an area of 277 m$^2$. The measure of the intercepted arc is $288^\circ$. Find the diameter.

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**Work on the following problems on a separate sheet.**

**Exercises**

Find the area of each shaded segment.

5. 

6. 

7. 

Find the area of the shaded region. Leave your answer in terms of $\pi$ and in simplest radical form.

8. 

9. 

10. 