

Worksheet 9.5 Circumference and Area of Circles

Complete the table below. Leave answers in terms of π .

	1.	2.	3.	4.	5.	6.	7.	8.
Radius	8	100	$\frac{3}{2}$					
Circumference				10π	30			
Area						81π	200π	50

Find the circumference and area (correct to three decimal places) for the circle with the given radius or diameter.

9. $r = 22$

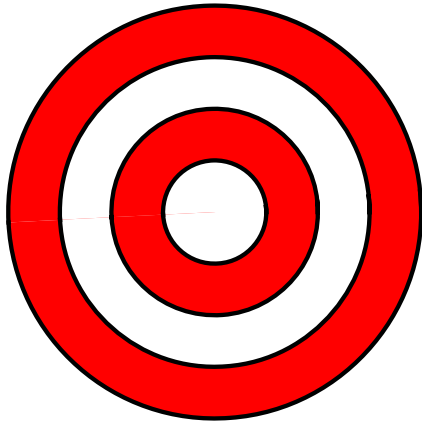
10. $d = \frac{9}{2}$

11. $r = 6x$

12. $d = 3\frac{3}{11}$

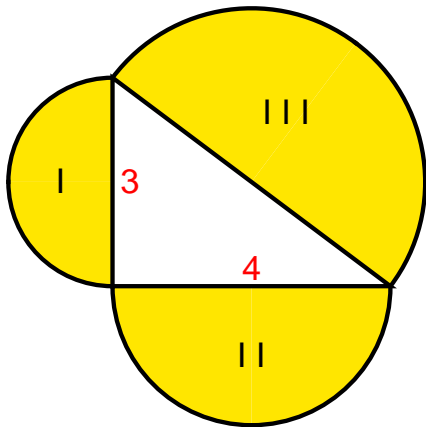
13. Which is the better buy, a 12 inch pizza costing \$9 or a 15 inch pizza costing \$14?

14. A target consists of four concentric circles with radii 1, 2, 3, and 4. (see figure below). Find the area of the bull's-eye and of each ring of the target. (what would be the area of the n th ring?)



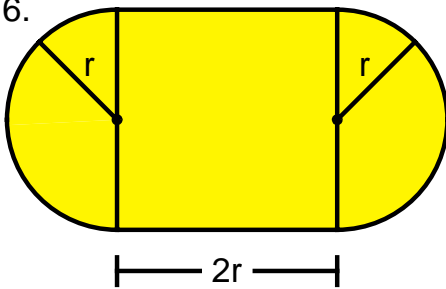
15. Semicircles are constructed on the sides of the right triangle shown below. Show that

$$\text{Area I} + \text{Area II} = \text{Area III}$$

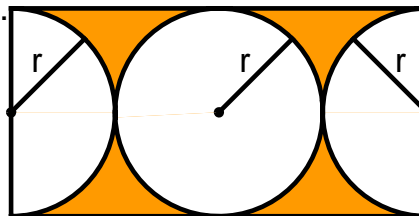


Find the area of each shaded region in terms of the radius, r .

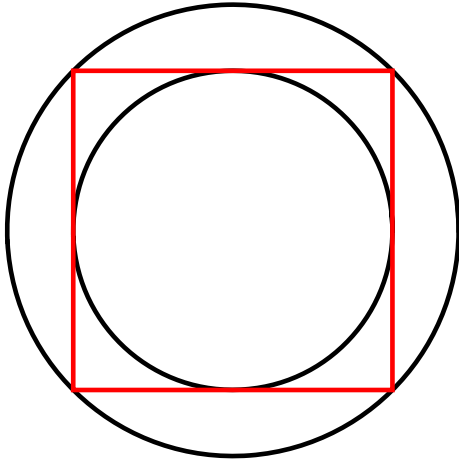
16.



17.

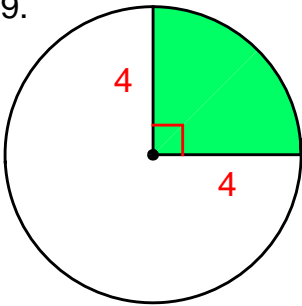


18. The diagram below shows a square with sides 8 units in length along with its inscribed and circumscribed circles. Find the area of each circle.

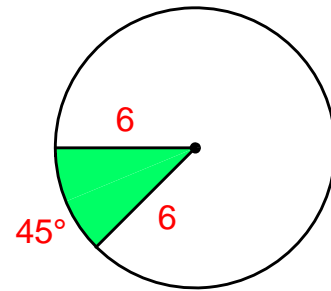
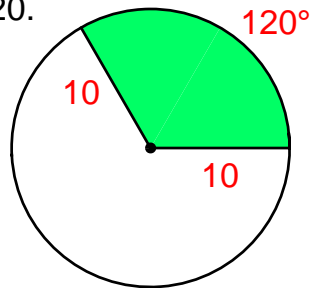


Find the arc length and area of each shaded sector.

19.

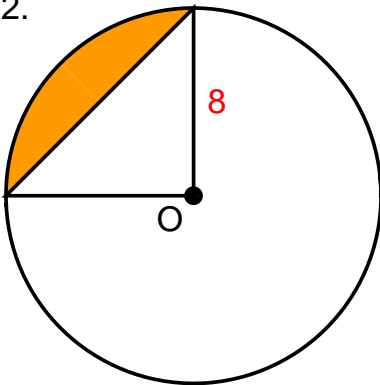


20.



Find the area of each shaded segment below.

22.



23.

