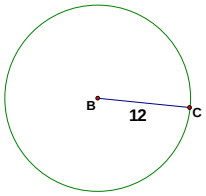
Chapter 8: Circles
Lesson 8-2: Formulas
Classwork

name _____
date _____
period ___

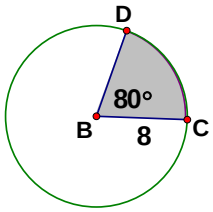
Find the value of the missing information.

1. circle: radius = 4 , diameter = ___ , circumference = ___ , area = ____
2. circle: radius = 11.2 , diameter = ___ , circumference = ___ , area = ____
3. circle: radius = ___ , diameter = 22 , circumference = ___ , area = ____
4. circle: radius = ___ , diameter = 14.3 , circumference = ___, area = ____
5. circle: radius = ___ , diameter = ___ , circumference = 100 π, area = ____
6. circle: radius = ___ , diameter = ___ , circumference = 50.26 π, area = ____
7. circle: radius = ___ , diameter = ___ , circumference = 100, area = ____
8. circle: radius = ___ , diameter = ___ , circumference = 12.5, area = ____

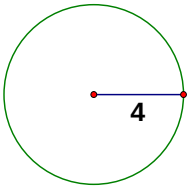
9. Find the area of the given circle answer _____



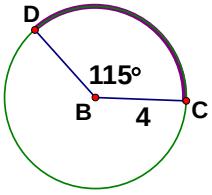
10. Find the area of the sector of a circle with a radius of 8 and an arc angle of 80˚.
answer _____



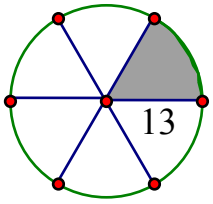
11. Find the circumference of a circle with a radius of 4. answer _____



12. Find the length of an arc with a radius of 4 and an arc angle of 115˚. answer _____



13. A circular garden is divided into 6 equal sections (sectors). If the radius of the garden is 13 feet, then find the area of one of the sections. answer _____



14. arc : radius = 10, arc angle = 60°, arc length = ___, sector area _____
15. arc : radius = 2 , arc angle = 110°, arc length = ___, sector area _____
16. arc : radius = 5 , arc angle = 48°, arc length = ___, sector area _____
17. arc : radius = 8.3 , arc angle = 135°, arc length = ___, sector area _____
18. arc : radius = 6 , arc angle = 210°, arc length = ___, sector area _____

To solve the following problems: Use the formula

$$\frac{center\angle}{360} = \frac{sectorarea}{\pi r^2} \quad \textbf{OR} \quad \frac{center\angle}{360} = \frac{arclength}{\pi d}$$

19. arc : radius = 10 , arc angle = ___ , arc length = 10π, sector area _____
20. arc : radius = 5 , arc angle = ___ , arc length = 2π, sector area _____
21. arc : radius = 6 , arc angle = ___ , arc length = 10, sector area _____
22. arc : radius = 7 , arc angle = ___ , arc length = 14.6, sector area _____
23. arc : radius = 50 , arc angle = ___ , arc length = 100π, sector area _____
24. arc : radius = ___ , arc angle = 90°, arc length = 100π, sector area _____
25. arc : radius = ___ , arc angle = 45°, arc length = 12π, sector area _____