

Chapter 8: Circles
Lesson 8-2: Formulas
Classwork

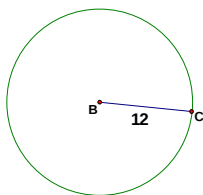
name _____
 date _____
 period ____

Find the value of the missing information.

- | | | | |
|------------------------------------|-------------------|------------------------------|-------------|
| 1. <u>circle</u> : radius = 4 , | diameter = ____ , | circumference = ____ , | area = ____ |
| 2. <u>circle</u> : radius = 11.2 , | diameter = ____ , | circumference = ____ , | area = ____ |
| 3. <u>circle</u> : radius = ____ , | diameter = 22 , | circumference = ____ , | area = ____ |
| 4. <u>circle</u> : radius = ____ , | diameter = 14.3 , | circumference = ____ , | area = ____ |
| 5. <u>circle</u> : radius = ____ , | diameter = ____ , | circumference = 100π , | area = ____ |
| 6. <u>circle</u> : radius = ____ , | diameter = ____ , | circumference = 50.26π , | area = ____ |
| 7. <u>circle</u> : radius = ____ , | diameter = ____ , | circumference = 100 , | area = ____ |
| 8. <u>circle</u> : radius = ____ , | diameter = ____ , | circumference = 12.5 , | area = ____ |

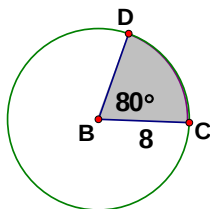
9. Find the area of the given circle

answer _____



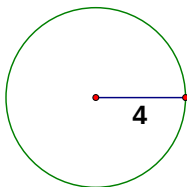
10. Find the area of the sector of a circle with a radius of 8 and an arc angle of 80° .

answer _____

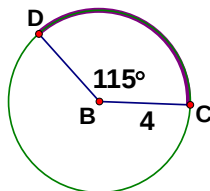


11. Find the circumference of a circle with a radius of 4.

answer _____

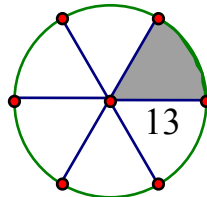


12. Find the length of an arc with a radius of 4 and an arc angle of 115° . answer _____



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

$$\frac{\text{center} \angle}{360} = \frac{\text{sector area}}{\pi r^2} \quad \text{OR} \quad \frac{\text{center} \angle}{360} = \frac{\text{arc length}}{\pi d}$$

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 ____