Pi (π) Worksheet

What is Pi (π)?

Pi (π) is the ratio of a circle's **circumference** to its **diameter**. It is an *irrational number*, which means its decimal never ends and never repeats. **A common approximation of π is 3.14.**

Formula for Circumference: C=πdC = \pi dC=πd

Formula for Area: A=πr2A = \pi r^2A=πr2

Where:

- **C** = Circumference
- **A** = Area
- **d** = Diameter
- **r** = Radius
- Use **π ≈ 3.14**

Part A: Multiple Choice - Choose the best answer.

1. What does π represent?
   a. The radius of a circle
   b. The diameter of a circle
   c. The ratio of circumference to diameter
   d. The area of a circle

2. Which of the following is an approximation of π?
   a. 2.14
   b. 3.14
   c. 4.13
   d. 5.31

3. Pi is:
   a. A whole number
   b. A rational number
   c. An irrational number
   d. An integer

4. The decimal form of π:
   a. Ends after a few digits
   b. Repeats a pattern
   c. Never ends and never repeats
   d. Is exactly 3.14

5. Which formula finds the circumference of a circle?
   a. $C = \pi d$
   b. $A = \pi r^2$
   c. $d = 2r$
   d. $C = r^2$

Part B: Vocabulary Matching - Match the term to its definition.

Term	Definition
6. Radius	A. Distance around a circle
7. Diameter	B. Distance from center to edge
8. Circumference	C. Distance across a circle through the center
9. Pi (π)	D. Ratio of circumference to diameter
10. Area	E. Space inside a figure

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Part C: Circumference - Use **π = 3.14**.

11. Diameter = 4 cm C = _____
12. Diameter = 8 cm C = _____
13. Diameter = 10 cm C = _____
14. Diameter = 15 cm C = _____
15. Diameter = 20 cm C = _____

Part D: Area of Circles - Use **π = 3.14**.

16. Radius = 2 cm A = _____
17. Radius = 4 cm A = _____
18. Radius = 5 cm A = _____
19. Radius = 6 cm A = _____
20. Radius = 8 cm A = _____

Part E: True or False

21. ____ - Pi is exactly equal to 3.14.
22. ____ - Pi is an irrational number.
23. ____ - The circumference of a circle can be found using C = πd.
24. ____ - The radius is half the diameter.
25. ____ - Pi is the same for every circle.

Part F: Word Problems

26. A circular garden has a diameter of 12 feet. What is its circumference?

    Answer: _____ feet

27. A circular table has a radius of 3 feet. What is its area?

    Answer: _____ square feet

28. A bicycle wheel has a diameter of 28 inches. What is its circumference?

    Answer: _____ inches

29. A circular fountain has a radius of 7 meters. What is its area?

    Answer: _____ square meters

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