



SAT Math Practice

Topic: Circles (Area, Circumference, and Equations)

Instructions

Solve the following problems related to circles, area, circumference, and equations. Show all work clearly. For multiple-choice questions, circle the correct answer. For grid-in questions, fill in the grid with your answer.

Practice Problems

- Find the area of a circle with a radius of 6 cm.
 - $36\pi \text{ cm}^2$
 - $12\pi \text{ cm}^2$
 - $18\pi \text{ cm}^2$
 - $72\pi \text{ cm}^2$
- What is the circumference of a circle with a radius of 8 cm?
 - $16\pi \text{ cm}$
 - $8\pi \text{ cm}$
 - $4\pi \text{ cm}$
 - $32\pi \text{ cm}$

3. A circle has a circumference of 20π cm. What is the radius of the circle?
- (a) 10 cm
 - (b) 20 cm
 - (c) 5 cm
 - (d) 15 cm
4. The area of a circle is 36π cm². What is the radius of the circle?
- (a) 6 cm
 - (b) 12 cm
 - (c) 18 cm
 - (d) 8 cm
5. The equation of a circle is $(x - 2)^2 + (y + 3)^2 = 25$. What is the center of the circle?
- (a) (2, -3)
 - (b) (-2, 3)
 - (c) (3, -2)
 - (d) (5, -3)
6. A circle has a radius of 5 cm. What is its circumference?
- (a) 10π cm
 - (b) 25π cm
 - (c) 5π cm
 - (d) 15π cm
7. What is the area of a circle with a diameter of 10 cm?
- (a) 25π cm²
 - (b) 50π cm²
 - (c) 100π cm²
 - (d) 75π cm²
8. A circle has a radius of 3 cm. What is the area of the circle?
- (a) 9π cm²
 - (b) 6π cm²
 - (c) 18π cm²

(d) $3\pi \text{ cm}^2$

9. The area of a circle is $25\pi \text{ cm}^2$. What is the circumference of the circle?

(a) $10\pi \text{ cm}$

(b) $5\pi \text{ cm}$

(c) $25\pi \text{ cm}$

(d) $15\pi \text{ cm}$

10. The equation of a circle is $x^2 + y^2 = 16$. What is the radius of the circle?

(a) 4

(b) 8

(c) 16

(d) 2

11. The center of a circle is at $(4, -3)$, and the radius is 6. What is the equation of the circle?

(a) $(x - 4)^2 + (y + 3)^2 = 36$

(b) $(x + 4)^2 + (y - 3)^2 = 36$

(c) $(x - 4)^2 + (y - 3)^2 = 6$

(d) $(x + 4)^2 + (y + 3)^2 = 36$

12. What is the area of a circle with a circumference of $14\pi \text{ cm}$?

(a) $49\pi \text{ cm}^2$

(b) $14\pi \text{ cm}^2$

(c) $24\pi \text{ cm}^2$

(d) $25\pi \text{ cm}^2$

13. Find the radius of a circle whose area is $64\pi \text{ cm}^2$.

(Grid-in Question: Answer in the grid as a number.)

14. Find the circumference of a circle with a radius of 7 cm.

(Grid-in Question: Answer in the grid as a number.)

Answer Key

1. (a) $36\pi \text{ cm}^2$
2. (a) $16\pi \text{ cm}$
3. (a) 10 cm
4. (a) 6 cm
5. (a) $(2, -3)$
6. (a) $10\pi \text{ cm}$
7. (a) $25\pi \text{ cm}^2$
8. (a) $9\pi \text{ cm}^2$
9. (a) $10\pi \text{ cm}$
10. (a) 4
11. (a) $(x - 4)^2 + (y + 3)^2 = 36$
12. (a) $49\pi \text{ cm}^2$
13. 8 cm (Grid-in answer)
14. $14\pi \text{ cm}$ (Grid-in answer)

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