

Push Tasks



Calculate a circle's circumference or area exactly in terms of π .

1. Find the circumference of a circle with radius 4.5 cm. Give your answer in terms of π .

2. Find the area of a circle with diameter 18 m. Give your answer in terms of π .

3. A bicycle wheel has radius 35 cm. Using $\pi \approx 22/7$, how many complete revolutions does it make over 1 km?

4. A circle's area is $36\pi \text{ cm}^2$. Find its circumference in terms of π .

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Use the ratio between two circles' radii to find the ratio of their circumferences or areas.

5. Two circles have radii in the ratio 3:4. What is the ratio of their circumferences?

6. Two circles have radii in the ratio 2:5. What is the ratio of their areas?

7. The ratio of the areas of two circles is 9:16. The smaller circle has circumference 18π cm. Find the radius of the larger circle.

8. The circumference of a circle is tripled. By what factor does its area increase?

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Solve composite or real-world problems involving circles (use $\pi \approx 3.14$).

9. Two concentric circles have radii 7 cm and 10 cm. Find the area of the annulus (ring) between them.

11. A circular pond has diameter 8 m. A concrete path 2 m wide is built around it. Find the cost of concreting the path at \$45 per m^2 .

10.



Find the arc length and area.

12. A running track has two straight sections 100 m long and two semicircular ends of radius 30 m. Find the total perimeter.

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Reason about and justify area relationships between circles.

13. A square of side length 14 cm has a circle inscribed touching all four sides. Find the area inside the square but outside the circle.

14. Circles have radii 5 cm and 13 cm. Is a circle of radius 9 cm (their average) exactly halfway in area too? Justify your answer.

15. A goat is tied to the corner of a square shed of side length 10 m, with a rope 12 m long. Find the area the goat can graze outside the shed.

16. A large circle's area equals the sum of the areas of two smaller circles of radii 6 cm and 8 cm. Find the radius of the large circle.